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Editorial Notes.

Exactly two months and the third International Petroleum Congress will be in full swing. It opens on the 4th of September at Bucarest, and ten days later draws to a close, the delegates during this period enjoying a round of hospitality, the educational side of which will be the strong feature. On September 5th, the delegates will participate in the arrangements made for a three days' excursion to the region of the most important petroleum fields of Roumania, Baicoi, Bustenari, Campina-Draganeasa and Moreni being visited, and on the two days following their return the Congress will hold its various meetings. September 10th is the date fixed for the excursion to the residence of the Royal and Princely Courts at Sinaia, while a visit to Moldavia, Constantza and other places is included in the list of special attractions. Apart from the business sessions, the arrangements for the educational excursions are such as should meet with the approval of the most fastidious, and we look forward to this third Congress being the most important and the most successful yet held.

The discontent which has for so long a time been smouldering in the hearts of the vast majority of the shareholders of the Anglo-Russian Oil Companies is on the point of bursting into flame. Agitation is in the air, and in the near future this gives promise of assuming very tangible form. It must of necessity be intensely interesting to the shareholders of the Russian Petroleum and Liquid Fuel Co., and especially to those who hold preference stock, for the naked truth has now come to the knowledge of a few that the £130,000 odd of the "preference shareholders' fund," which has all along been understood to be for their benefit and security, is not for them at all, but in case of liquidation (and it is wise to look ahead) constitutes a general claim. A meeting of the preference shareholders is to be held to-day, when the question for consideration is the course to be adopted for the protection of their interests.

Though for a time the feeling of misplaced confidence in the board of management was smothered, the directors are not in a happy position, and, sooner or later, a drastic change must of necessity take place. The suggestion now is that close investigation into the management of the company shall be undertaken, a suggestion which, in view of the position of the company, ought to be unanimously agreed to even by the directors themselves. It is not the first time that such a committee has been appointed, and it may be not the last, but we do earnestly hope that the sole object of that committee

shall be to probe the many mysterious matters to the bottom. If it is a question of having to stir up considerable mud—well, even this is preferable to going round with a whitewash brush in hand ready to dab each director in turn. Company directors are public servants; they have a duty to discharge—a very serious duty—and it is to them the shareholders look for explanation when things are going from bad to worse. We trust that this renewed effort of agitation may be crowned—as it deserves to be—with success.

Baku is evidently now bent upon making up for lost time, for according to the most recent reports, feverish activity prevails in regard to the shipment of petroleum products, particularly fuel oil, to the interior of Russia by way of the Caspian Sea and the Volga. There are days when the shipments reach the enormous figure of 4,000,000 poods. The recent protracted strike of the sailors and officers of the oil-carrying fleet caused an enormous accumulation of stocks at Baku at a time when the oil was badly needed for the inland markets, and as a result of the strike, the deliveries of oils to the markets of the interior only commenced a month and a-half later than usual. It is therefore doubtful whether even the strenuous efforts now being made to hurry the oil up to the interior will avail to entirely make good the loss of so much valuable time. At some of the distributing centres on the Volga the stocks of fuel have been completely exhausted, and as a considerable time must necessarily elapse before the fresh supplies shipped from Baku can be delivered there, those of the consumers who are still depending on oil as their fuel may find themselves in a critical position. A considerable number of users of oil fuel have long ago abandoned it in favour of coal.

The details of the petroleum export trade of America during May go to shew a substantial decrease has been registered in this direction recently. The total exports for May register the smallest amount exported for a number of months, both in quantity and value, but this can be attributed among other things to the position of the tank fleet. One cannot get behind the fact, however, that a considerable harm has been done to the American petroleum export trade by the recent agitation directed against this branch by the Government itself, for, so far, the monthly exports during the present year have been much below those of 1906. Compared with May of last year, the exports for the corresponding month this year shew a decrease of about 7,000,000 gallons, the whole of which amount falls on crude oil. On the other hand, illuminating oil exports for May shew an increase, which is highly satisfactory as proving that American oil abroad still holds its own, if not more.

THE OPERATIONS OF MESSRS. NOBEL BROS. DURING 1906.

GRATIFYING REPORT.

A Dividend of 18 Per Cent.

The annual meeting of Messrs. Nobel Bros. was held on the 1st inst., when a most gratifying report was placed before the shareholders, which included the declaration of a dividend of 18 per cent. upon the nominal capital of the company, as well as the granting of additional allowances to the employés, etc.

After the miserable failures which the English companies have made in the Baku fields, the report of Messrs. Nobel Bros. has more than ordinary interest, for it shews that as in the past, so to-day it is possible to achieve remarkably satisfactory results in the Russian oil industry.

The gross profit of the company during the past year amounted to 7,383,899 roubles. The total gross revenue was 112,495,306 roubles, this includes 87,000,000 roubles realised by the sale of petroleum products, of which the sale of 34,622,841 poods of kerosene realised about 38,000,000 roubles, whilst 94,235,780 poods of residuals realised about 35,000,000 roubles.

On December 31st, 1906, there were in stock 11,154,382 poods of crude oil, valued at 1,409,418 roubles; 12,813,482 poods of kerosene, partly duty paid, valued at 9,869,156 poods; residuals, 39,925,838 poods, of a value of 6,770,445 roubles. The cost of all oils in stock at Baku and elsewhere is shewn in the balance sheet at 21,450,239 roubles.

The total expenditure amounted to 105,111,407 roubles, the principal items being freights, 11,736,204 roubles; and purchase of petroleum products, 32,556,272 roubles. The amount written off as loss is 834,883 roubles, of which bad debts amounted to 292,254 roubles; robberies and embezzlements, 53,227 roubles; and loss on rate of exchange, 191,833 roubles.

The securities and shares held by the company stand in the balance sheet at 6,669,016 roubles, of which Russian securities are 2,614,932 roubles, including 4 per cent. Government stock at 73½, 2,034,373 roubles.

The shares of foreign companies held by the company are valued at 4,054,084 roubles, namely, shares of the Austrian Importing Co., 104,311 roubles; shares of the Deutsche Russische Naphta Import Gesellschaft, 1,145,996 roubles; shares of the Société Anonyme d'Armements, 1,541,217 roubles; and shares of petroleum distributing and shipping companies in England, 1,262,559 roubles.

After writing off from the gross profit 1,430,193 roubles for depreciation of property and 473,645 for working capital, there is left a net profit of 5,480,060 roubles. The directors proposed that a sum of 2,700,000 roubles should be distributed to the shareholders as a dividend of 18 per cent., and a sum of 1,135,604 roubles paid out as remuneration to directors and extra allowances to employés, leaving a balance of 203,406 roubles to be carried forward.

LONDON OIL SHARE MARKET.

FRIDAY, JULY 5TH, 1907.

The welcome improvement that has taken place in the principal securities on the London Stock Exchange has not so far broadened out to the less important sections, and we have little encouraging news to report in connection with Oil Shares.

Shell Transport Ordinary have been the centre of attraction, but the Shares have weakened somewhat considerably this week, although the fact of their being quoted ex-rights must be taken into consideration. The Preference Shares have attracted some little attention, in fact some rather exceptional blocks of Shares have changed hands, but there is no alteration in the quotations on balance. Assam Oil have been noticed, but dealing has not been of sufficient importance to change the price. Anglo-Mexican Oilfields are quoted at par to ½ premium.

On Monday following our last issue a weak tendency prevailed, which resulted in a decline of ⅛ in Bibi-Eybats at ⅜-⅝, 1s. per share in Schibaieff Ordinary at 3s. 6d. to 4s. 6d., and 1s. 6d. in Shell Ordinary at 45s. to 46s., but the latter recovered 6d. of the loss on the following day, closing 45s. 6d. to 46s. 6d.

On Wednesday, Baku Ordinary lost 6d. at 3s. to 4s., and on Thursday Shell Transports were quoted 43s. to 44s., ex-rights; while Californian Oilfields rose 1 point at 98-100.

On Friday, Californian Oilfields improved ⅛ to 6 to 6½, and on Saturday Shells were the turn easier at 42s. 9d. to 43s. 9d., while on Monday they relapsed still further to 42s. to 43s., Californian and Russian Debentures being both marked ex-dividend at 96-98 and 79-82 respectively.

Tuesday's business shewed a further shrinkage in Shells to 41s. 6d. to 42s. 6d., which on the following Friday was accentuated to 41s. to 42s., but on the intervening Thursday Baku Ordinary recovered 3d. to 3s. 3d. to 3s. 9d.

The end June settlement commenced on the 25th ult., when the account to be adjusted in the Miscellaneous Market was very small and rates exacted for carrying over shares, in all sections, very light.

A comparison of making-up prices from those fixed at the mid-month "carry-over," shew only unimportant alterations. Anglo-Russians rose 3d. at ⅝. Baku Ordinary, ditto, at 3s. 3d., and Californian Oil Fields ⅛ at 5½.

On the other hand Spies fell 9d. at ⅜. Shell Transport Preference ⅛ at 1¾, while Baku Preference at 5s. 3d. Russian Ordinary at ¼, Preference at 6s., and Shell Transport Preference at 2½ are without change.

Latest quotations will be found on page 12.

BATOU M PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended June 9th, 1907, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1906.	1907.	1906.	1907.
To Europe ..	492,000	838,000	182,000	220,000
To the East ..	30,000	78,000	1,000	—
To Russian Ports.	—	—	—	9,000
From 1st Jan. to 9th June:—				
To Europe ..	6,212,000	8,452,000	3,399,000	4,679,000
To the East ..	1,666,000	5,742,000	24,000	112,000
To Russian Ports.	1,469,000	1,227,000	110,000	80,000

SHALE MINING IN NEW SOUTH WALES.

RECENT DEVELOPMENTS.

During the past few weeks a number of articles upon shale mining and the recent developments in New South Wales in connection therewith have appeared in the *New South Wales Daily Telegraph*, and in view of the importance which attaches to the subject we feel that a good purpose will be served by our giving the salient points therein brought forward.

The writer points out that the Commonwealth Oil Corporation has acquired large areas of mining leases in the Wolgan and Capertee Valleys, and has bought the interests of the New South Wales Shale and Oil Co. at Torbane and Hartley Vale. The object is to prospect and mine for shale and coal, and to manufacture and trade in the various products derivable therefrom. The minerals have been found in the Blue Mountains in large quantities, mines have been opened, roads have been made, plant installed, a wonderful mountain railway is in course of construction, and the works carried on for many years past at Torbane and Hartley Vale are being pushed ahead as only a liberal fund of ready money could push them along. In other words, the advent of the Commonwealth Oil Corporation has brought about something approaching a revolution in a branch of industry that in the past had been, in some measure, restricted to the operations of one local company.

What comparatively only a few months ago were impenetrable gullies in the rough Blue Mountain country are now resounding with the boom of blasting operations, the clang of platelayers' hammers, and the hum of machinery. The hillsides which for centuries remained untouched by the hands of men are now pierced by mine tunnels; trees which had braved the winds and rains for many lifetimes have fallen under the woodman's axe, and where they stood the ground is held by machinery sheds and mining plant. Where only a few men had ever walked—their number might perhaps be tallied on the fingers of one's hands—there are now mining settlements, surveyors' and fettlers' camps, and railway depôts. Tracks that once were traversed only by occasional stockmen, are now cut up, crossed, and crossed again, by the iron road of advancing settlement. In the thirty odd miles of virgin mountain forest between Clarence, on the Great Western railway, and the head of the Wolgan Valley, there are to-day some 2,000 souls—men, women, and children, all, directly or indirectly, intent upon winning the precious shale, and finding a way to get it to the markets of the world.

The history of the discovery of shale in New South Wales is full of interest. It has been recently told by William Lamb (for many years servant of the New South Wales Shale and Oil Co., and now an employé of the Commonwealth Oil Corporation). When he was a small boy and his father was a maintenance man, the Valley—now a hive of industry—was tenanted by Michael Scott and his son, farmers. They accidentally

found a "stone" that would burn, and told of their curious discovery to George James, a Bathurst Road storekeeper. Then, one night there happened along on the Bathurst coach, Mr. Saul Samuel—afterwards Sir Saul, the many years' honoured Agent-General for New South Wales—and he heard James speaking of what the solitary farmers had told him. "I should like to have some of that," Mr. Samuel said, and when he returned on his road to Sydney he was supplied with a sample. Soon after the Scotts accepted an offer for the purchase of their farms, and it was not long after that transaction before Messrs. Dixon (in later days an Inspector of Mines), Price and Sellaway drove the first pick into the rocky walls of Hartley Vale. They were looking for "the stone that burns," and they found shale similar to, but more valuable than, that which Mr. Young and his colleagues were working with in Scotland.

That was the beginning of the Hartley Kerosene Co.—the pioneers of the oil-shale industry in Australia. They worked on the western side of the Valley, but their example was followed very speedily by the Western Kerosene Oil Co., which by a contradiction in its name, operated on the eastern side of the creek that runs through the Vale. The two companies worked away for a long time, the shale being sent by bullock drays, *via* a depôt on the Bathurst Road, to Penrith, some 45 or 50 miles away, whence the then new railway carried it to retorts at Alexandria, near Sydney. The natural conclusion was that, in face of such haulage, neither company could make a success of the undertaking. Both got into difficulties, the Western company especially so by reason of its seam of shale "pinching down." The struggle was still going on in 1872, when Mr. Samuel again came to the front, and, with a few others, bought the assets of the two companies, and formed the New South Wales Shale and Oil Co., which in March last year, after a brave existence of "downs" and "ups," merged into the then newly-formed Commonwealth Oil Corporation.

When the pioneer companies had ceased to exist, the successors put down new exploration bores on the property acquired from the Western Kerosene Oil Co., and fresh large deposits of mineral were found. Even after this the shale was sent to Alexandria for distillation, but as a large quantity of inferior mineral was being produced it was decided to dismantle the Sydney establishment and erect retorts and other plant at Hartley Vale. From that time on until American competition and the abolition of the duty on kerosene by the Reid Government changed the commercial aspects of the concern, Hartley Vale was the home of kerosene manufacture in Australia, but with the removal of the duty it became advisable to confine operations to the handling of the shale for the sake of the by-products. That has been continued ever since, and Hartley Vale is still the head-centre of the oil-shale works in the Commonwealth. But the mining there has, in view of the

recent developments, practically ceased, the works being restricted to refining and manufacturing from the crude oil produced from the shale won at Airlie and retorted at Torbane, a few miles from Capertee—properties developed by the N.S.W. Shale and Oil Co. ten or a dozen years ago.

But two things were essential to the development of the Wolgan Valley. First of all, the discovery of a reasonable means of communication with the outside world, and, secondly, a substantial assurance that the deposits of shale there were of such promise as to warrant the expenditure of large sums of money. When a tract into the valley was found, an examination of the mineral resources at once justified further exploration, and it is as a result of that exploration that the great works now in progress were undertaken.

The discovery of oil-shale in workable quantities at Hartley Vale during the decade following upon the year 1860, led to the search for other like deposits in the Blue Mountains, and many years ago—perhaps the best part of 40—prospectors found the mineral in the Wolgan Valley. It was known to be there, and especially also in the valley of the Capertee river; but in each case the “find” was in places too far removed from means of transport. The shale could not be got away from the mine by any route that was short enough, or easy enough, to offer prospects of future profit, and the prospecting went for nought. Thirty years ago a farmer established himself on the Wolgan near the junction with the Capertee river, and, as stated in the previous article, the Bells, of Richmond, used to take cattle across the country between the Wolgan and Lithgow valleys; but for practical purposes the wealthy coal and shale-bearing Wolgan Mountain, right up at the head of the valley bearing its name, remained untouched. Those few sturdy adventurers who had been there—Wm. Lamb, of Hartley Vale, previously referred to, was one—entered from the Wallerawang side. Their starting point was altogether too far away. Martin Zoebel, acting under instructions from Mr. D. A. Sutherland, found a practicable track, and it remained, then, for the Commonwealth Oil Corporation, with its vast resources, to establish the means of communication.

Mr. Leon Gaster, who has been away for a few months investigating the latest development in illuminating engineering in the United States, has now returned to London. Mr. Gaster, it may here be mentioned, acted as one of the delegates at the Dedication Ceremonies of the Engineering Buildings Societies in New York, Mr. Andrew Carnegie having spent for the erection of this building £60,000. The *Illuminating Engineer*, of New York, a special magazine devoted to the subject of illumination, published in a recent issue a splendid portrait of Mr. Gaster, and made some complimentary reference to his pioneering work in establishing a new branch of specialisation in the engineering profession, namely, the illuminating engineer in this country. It is expected that the future illuminating engineer will be in a position to impartially advise his consumers on the best and most effective method of illumination and treating of illuminants on their true merits. We wish to extend to Mr. Gaster (who is well known to our readers by his contributions to the *PETROLEUM REVIEW* dealing with the Roumanian oil fields generally) our heartiest congratulations for the honour recently bestowed upon him by H.M. King Charles of Roumania, in conferring the Jubilee Medal for 40 years, reign, as a special sign of recognition for services rendered to his native country by encouraging the development of Roumanian industries, science and art. It may be added that this distinction has only been conferred upon a few distinguished subjects of foreign countries, Mr. Gaster being now a British subject.

THE IMPORTATION OF PETROLEUM INTO SIERRA LEONE.

With reference to the notice announced in the *PETROLEUM REVIEW* some weeks ago, respecting the proposed amendment of the law relating to the importation and keeping of petroleum in Sierra Leone, the Board of Trade have now received a copy of the “Petroleum Amendment Ordinance, 1907,” which was assented to by the Acting Governor of the Colony on 2nd May.

The general provisions of the Ordinance are the same as those previously stated in the Bill, but with regard to the power given to the Governor to remit duties paid on petroleum imported for industrial or manufacturing purposes, it is provided in the Ordinance that—

“petroleum intended to be used as the motive power in the transport of goods or live stock by land or water for purposes of trade shall be deemed to be imported for an industrial purpose.”

GALICIAN PRODUCTION DURING APRIL.

The production of crude oil at the various Galician oil fields in April was as under:—

	Production in April. Tons.	Stocks on Apr. 30th. Tons.
West Galicia—		
Potok	1,020	4,225
Rogi	891	798
Rowne	185	402
Tarnawa-Wielopole-Zagorz ..	1,280	3,684
Krosno	2,780	11,844
Other West Galician Fields ..	1,820	4,061
East Galician Fields—		
Boryslaw-Tustanowice	62,500	378,690
Schodnica	3,200	10,022
Urycz	1,120	5,130
Mrzdnica	340	320
Other East Galician Fields ..	1,040	914
Total	76,176	420,090

The quantity lost by leakage or used as fuel at the wells during April amounted to 3,870 tons, of which 3,000 tons were at Boryslaw-Tustanowice. The total stocks of crude oil have during the month declined by about 1,300 tons.

The Royal Dutch Co. has decided to discontinue publishing the figures of its output of refined oil, as, owing to the increased value of the bye-products, these figures have ceased to give an accurate idea of the state of the business.

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OUR PETROLEUM IMPORTS AND WHERE THEY COME FROM.

*Interesting .
Comparative
Details. . . .*

THE PAST SIX MONTHS' TRADE.

(“REVIEW” SPECIAL.)

Though the second half of 1907 has only just commenced, we are in a position to give our readers some highly interesting details concerning the petroleum import trade of the United Kingdom during the first half of the year, and, by making a few comparisons, to see how far we are progressing in the use of petroleum and its many products, and also which are the countries with whom we do the greatest share of our trade in this direction.

Taking the total petroleum imports into this Kingdom for the past six months, we find that they are exactly a set-off against the figures of last year—for instance, this year from January to June inclusive we have imported 146,000,000 gallons of petroleum products, whilst for the whole of 1906 the figures were 292,000,000 gallons. During the first half of last year we imported 147,000,000 gallons, so that the figures for our six months' trade this year only fall short by 1,000,000 gallons of the amount imported during the first half of 1905. When we take the year 1905, however, the comparison is by no means so favourable, for during that twelve months 307,000,000 gallons were imported, the figures for the first half of the year being 151,000,000 gallons. There has, however, been no serious diminution in our petroleum import trade, although various temporary causes have brought about slightly decreased figures. Recollecting that during the first half of last year, owing to the Admiralty having gone largely in for liquid fuel, several consignments of fuel oil were imported and went into stock, whereas during the past six months the fuel oil imports have been cut down to more than one-half, it will be at once seen that the various branches of our import trade are in a healthy condition. We will now take the various oils *separatim*.

ILLUMINATING OIL.

Our imports of illuminating oil for the past six months have been 2,000,000 gallons in excess of those for the corresponding period of 1906, the total figure being approximately 72,800,000 gallons, but when compared with the illuminating oil imports for the first half of 1905, a decrease of 11,000,000 gallons is shewn. The increase of this year's figures over those for the first part of 1906 is accounted for in the increase of a like amount of American illuminating oil, but the figures of Russian oil are practically the same as for a year ago. The chief characteristic in the countries furnishing us with illuminating oil is the rise of Roumania, for since a year ago, she has more than doubled her illuminating oil imports, and almost trebled her total petroleum imports to the United Kingdom. As we have pointed out, American illuminating oil represents the total

increase in the imports in this branch, so Roumania's great increase has been brought about at the cost of a similar reduction of the imports from the smaller producing or exporting countries.

SOLAR OIL.

Next in volume to illuminating oil comes the solar oil, which has since the commencement of this year been imported into the United Kingdom to the extent of over 29,600,000 gallons. This figure is 2,000,000 gallons in excess of that imported for the similar period of last year, and a decrease to a similar extent when compared with the figures for the first half of 1905. America still holds her position of supplying the vast bulk of this article, and for the past six months has supplied 86·2 per cent. of this total, as against 88·8 per cent. for the first half of 1906 and 67·7 for the first six months of the preceding year. The greater portion of the remainder comes from Russia, who this last six months has supplied 10 per cent. of the total, as against 3 per cent. in 1906 and 25 per cent. in 1905. Two years ago Roumania also assisted in satisfying the demands of this country for solar oil, but last year her exports to the United Kingdom dropped off, while for obvious reasons she has not exported any solar oil to us this year, preferring to strengthen her hold in regard to the export of other products.

LUBRICATING OIL.

During the last six months we have imported 22,400,000 gallons of lubricants, an amount 10,000,000 gallons in excess of that imported for the corresponding period of 1905, but a decrease of 5,000,000 gallons when compared with the figures for the first half of last year. Of the total quantity shipped to this country this year, America has been responsible for 81 per cent., as against her 85 per cent. and 71 per cent. for the half-years of 1906 and 1905 respectively, while Russia has contributed 9 per cent., as against her 7 per cent. in 1906, and her 18 per cent. during the first half of 1905.

BENZINE—MOTOR SPIRIT.

Some months ago we prophesied that at least 30,000,000 gallons of benzine would be consumed in the United Kingdom this year for motor spirit purposes. We were not far out, and certainly not over the mark, for the importation of benzine for the first half of the year has reached 15,600,000 gallons, an advance of 25 per cent. upon the quantity imported for the corresponding period of last year, while that quantity was in its turn an increase of 33 per cent. upon the amount imported during the first half of 1905. When we come to look at the sources of supply we find that

remarkable changes have taken place since petrol became such a popular article of every day use. Until quite recent years, America was the greatest producer of benzine, and consequently the largest importer into the United Kingdom, for in 1905 she was responsible for 56 per cent. of our total benzine imports, Dutch India supplying 34 per cent. of the total quantity. To-day, the position has been more than reversed, for while Borneo and Sumatra are supplying 73 per cent. of our motor spirit, America only comes forward with 16 per cent. as against her 41 per cent. during the first half of last year and Dutch India's 50 per cent. But one of the most striking features in connection with our benzine imports is the rapid headway which Roumania is making. Two years ago we did not receive a single gallon of Roumanian spirit into the United Kingdom during the first part of the year, but to-day that progressive country supplies 9 per cent. of our total benzine imports, or more than half as much as America. Month by month Roumania is coming more and more to the front in this respect, for during the corresponding period last year we were only indebted to Roumania for 4 per cent. of our motor spirit. We have reason to believe that the progress of Roumania in this respect will be even more marked as time goes on.

CONCLUSIONS.

Passing over the comparative small importations of residuals and oils classified by the Custom House as "other descriptions," we come to the totals from the various producing countries which have gone during the last six months to make up the 146,000,000 gallons we have received into the various ports of the United Kingdom. Here, again, we see how time changes the spheres of activity—we notice how certain producing centres rise and fall—and seeing that the total figures are about on a par with those of recent years, it is easy to see that what is one country's gain must inevitably be another country's loss. America, so far this year, has supplied 68 per cent. of our total petroleum imports, as against 74 per cent. during the first half of 1906 and 66 per cent. for the corresponding period of 1905. Thus over two-thirds of our petroleum trade is done with America. Next comes Russia, which with all her misfortunes stands out very poorly. For the first six months of this year 14 per cent. of our total petroleum imports have come from the Caucasus, this being the same percentage as last year, but considerably under that for the first half of 1905, when 25 per cent. of our imports came from Russia. The greatest progress to be noted from the total imports of petroleum products is in the case of both Roumania and Dutch India, where in each case the imports have risen from 2 per cent. of the total in the first half of 1905 to 7 per cent. during the first six months of this year. In regard to these two latter countries the progress achieved of late, as seen from the part they now play in exporting petroleum products to the United Kingdom, suggests much as to the future, and without a doubt at the expense of older producing centres.

BAKU PETROLEUM PRODUCTION DURING MAY.

The production of crude oil at the Baku oil fields during May amounted to 39,708,452 poods, of which 10,124,311 poods were obtained at Bebe-Aibat. Spouters in May produced 165,000 poods.

The production of the principal firms was as under:—

	Poods.
Nobel Bros.	5,100,000
Caspian and Black Sea Society	3,300,000
Caspian Society	2,200,000
Baku Naphtha Co.	2,000,000
Mantascheff and Co.	1,900,000
Mirzoeff Bros.	1,500,000
Russian Naphtha Co.	1,400,000
Aramazd Co.	1,100,000
Bibi-Eybat Petroleum Co., Ltd.	1,100,000
Zoubaloff	1,000,000
Moscow-Caucasian Co.	900,000
Schibaieff Petroleum Co., Ltd.	900,000
Naftalan Co.	900,000
Baku Russian Petroleum Co., Ltd.	900,000
Pitoeff and Co.	900,000
Nagieff	900,000
Russian Petroleum and Liq. Fuel Co., Ltd.	700,000
European Petroleum Co., Ltd.	600,000
Tiflis Co.	500,000

THE PETROLEUM TRADE OF NOVOROSSISK DURING APRIL.

During April (o.s.) the following quantities of petroleum were delivered at Novorossisk from Baku and Grosny:—

	From Baku. Poods.	From Grosny. Poods.	Total. Poods.
Illuminating oil	—	11,173	11,173
Crude oil	—	158,437	158,437
Residuals	25,963	—	25,963
Benzine	—	119,603	119,603
Ligroin	—	16,486	16,486
Total	25,963	305,699	331,662

The shipments from Novorossisk during April, to Russian home ports only, were:—

	Poods.
Illuminating oil	336,102
Residuals	75,000
Benzine	192
Total	411,294

There were no shipments to foreign ports in April.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM CO., LTD.—The production for the week ended 22nd June was 261,000 poods, or 4,207 tons; and for the week ended June 29th was 243,000 poods, or 3,917 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL CO., LTD.—The production for the week ended 23rd June was 178,000 poods, or 2,870 tons; and for the week ended June 30th was 172,000 poods, or 2,773 tons.

SPIES PETROLEUM CO., LTD.—The output for the week ended 23rd June was 132,825 poods, or 2,142 tons; and for the week ended 30th June, 130,060 poods, or 2,097 tons. (6 days' production, 1 day strike.)

THE EUROPEAN PETROLEUM CO., LTD.—The production for the week ended 23rd June was 136,859 poods, or 2,206 tons; and for the week ended 30th June was 137,901 poods, or 2,223 tons.

A VISIT TO THE E. W. Bliss Company's New Paris Works.

THE HOME OF PETROLEUM CAN MACHINERY.

(By Our Special Commissioner.)

Concluded from Page 341.

As our readers are aware, the phenomenal growth in the application of machinery for the making of petroleum cans has been consequent upon the very great developments in the oil industry, and in order to keep pace with the continuously extending consumption of petroleum products, it has become more and more essential that considerable skill and attention should be given to packages for transporting it. As our readers are well aware, the transport of oil has for years been extensively carried on in canisters, such as the E. W. Bliss Company's machines turn out at the rate of hundreds of thousands per day.

The present standard size and shape of petroleum cans, though simple in design, is the result of many experiments to obtain the most convenient form containing a given quantity of oil, combined with the best method of producing perfectly tight packages in a practical and economical manner. Fig. 1 shews this type of can now universally employed by American, Russian, Indian, and European refiners and packers.

It is about $9\frac{1}{4}$ inches square by $13\frac{3}{4}$ inches high, having cubical contents of 1,125 inches, or an equivalent to five gallons, this being the can universally known as the five gallon can. As will be seen in the illustration, the corners of the can are generously rounded, and the handle is affixed to the centre of the top.

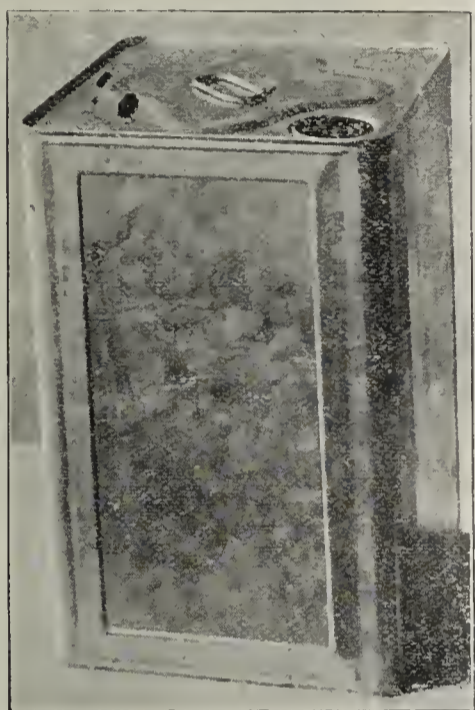


FIG. 1.



FIG. 2.



FIG. 3.

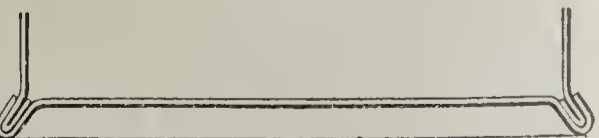


FIG. 4.

Ever since the shape of the can had been definitely decided upon, experiments have been carried on with a view to obtaining stronger and more reliable top and bottom seams than the ordinary squeezed or crimped seam, but at the same time using no more material nor increasing the cost of production. The sketches 2, 3, and 4 shew the different seams which were successively used in the order named. The first (Fig. 2) shews the old style or squeezed on bottom. This seam has long been regarded as unsatisfactory for petroleum, because, though soldered, the rough handling to which the tins are so often subjected make it liable to yield and to cause most undesirable leakages.

The double seam (Fig. 3) was next tried for a time, but was never widely adopted because of the greater amount of labour and material required, which mean increased cost of production. The increase in the cost of material was due not only to the wider lid- and body-flanges made necessary for this seam, but also to the larger amount of solder required to make it perfectly liquid proof.

Then came the hemmed edge can (Fig. 4), which has since been universally adopted, because it has been proved to be stronger, more reliable and especially advantageous in the process of manufacture where a large number of cans are produced. Experiments with this style of seaming have shewn that the leakage is reduced to practically nil. The explanation of this, as can be seen from Fig.

5, is that the solder flows about the smoothly doubled over edge of the body by capillary action, firmly uniting with the tin on both sides of the body and bottom. This method unquestionably produces a much better and stronger seam than that formerly used

in which the flow of the solder was arrested by the burr on the edge of the body (Fig. 6), around which it did not flow, thus soldering one side only of the body sheet.

With the hemmed edge can, after the bottom has been securely squeezed on to the body, the seam is rolled especially tight in the machine given in Fig. 23, making it possible to produce a strong and tight seam with the use



FIG. 5.



FIG. 6.

of less solder than by any other method. Experience has proved that this seam occasions less leakage in transportation and handling than any other seam used for the work in petroleum can making. The fact that according to the Bliss method of manufacturing the hemmed edge can, the rough tinned edge of the sheet has not been removed by the blank-cutting process, leaves that much tin (adhering to this edge) available for soldering the joint inside of the seam, and not only adds to its tightness and strength, but also reduces the amount of solder which needs be applied by outside application.

In order to fully realise the advantages of the hemmed edge can, as compared with the double-seamed can, it must be considered that in order to obtain a substantial double-seam, it becomes necessary to prepare the body as per Fig. 7, that is to say, after cutting the body blank from the full sheet and forming the bodies, the top and

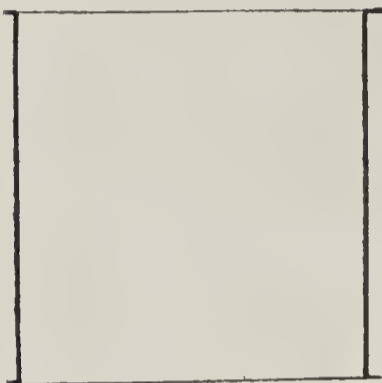


FIG. 7.

bottom edges have to be deflected as a preparation for double seaming. This calls for at least $\frac{3}{16}$ inch to $\frac{1}{4}$ inch more stock in the way of width of body blank than is required for either the single-seamed can or the hemmed edge can. In any factory where cans are required in large quantities, this additional

stock will increase the expenditure for tin plate by a considerable sum each year. Further, the deflecting of a square edge and keeping it in good condition during the shaping of the body, lockseaming at the corners, and during the intermediate handling, call for a great deal of additional care and labour. Moreover, in the case of double-seamed cans the edges of the top and bottom lids have to be stamped as per Fig. 8, calling for at least $\frac{1}{8}$

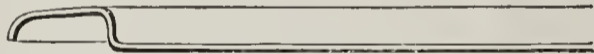


FIG. 8.

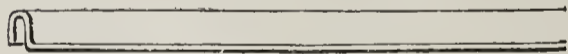


FIG. 9.

inch more tin plate all round than the ordinary lid (Fig. 9) used on the single-seamed or the hemmed edged can. Thereby considerable expense is added to the cost of stock, besides which the double-seaming operation itself is naturally much slower than the processes used for the hemmed edge can.

Having said so much of the methods that have been employed from time to time for attaching the tops and bottoms of petroleum cans, we will now consider a few of the different machines, the credit for the development of which belongs to the firm of E. W. Bliss Company.

The first machine to which we would draw the attention of our readers is that illustrated in Fig. 10. This special press, used in its inclined position, is used for cutting and stamping in one operation, by means of combination dies, the tops and bottoms of the cans. Some of these, especially those for the Far Eastern trade, are of very elaborate design, as the illustrations in Fig. 11 on the next column shew. With this machine (No. 21), after a top bottom has been formed, it falls through the back of the press by gravity, and an experienced operator can produce

FIG. 10.

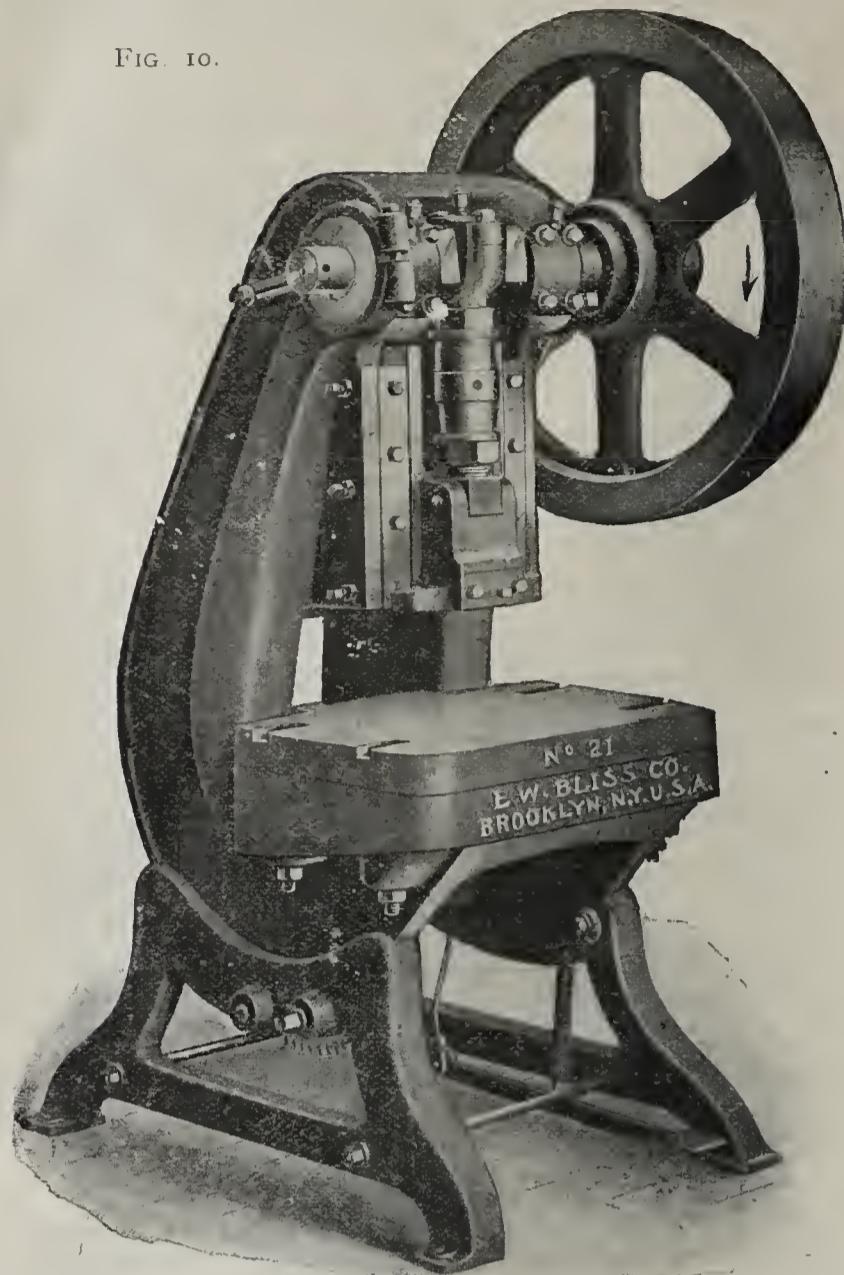


FIG. 11.—A FEW ELABORATE PETROLEUM CAN DESIGNS.

from the one machine between 6,000 and 7,000 heads or bottoms in the short space of 10 hours. The bottoms or heads are then ready for affixing to the bodies of the tin, and so we will proceed to briefly refer to this interesting part of the making of the can. The body of the can is made in two pieces. In the older methods, the body halves were cut in a press by means of dies from tin sheets (as shewn in the shaded portion of Fig. 12) whereby

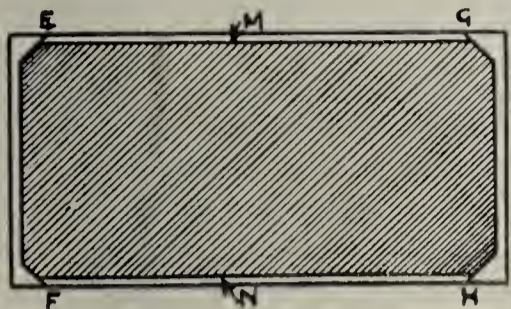


FIG. 12.

a large portion of the edge was cut away as scrap. In the newer methods, however, although presses and dies are also used, only the ends E-F and G-H are cut from the proper size sheet without cutting off

the edges M and N. The special press used for this operation is illustrated in Fig. 13. The operator need only place the sheet on the die where it slides into proper position, being guided by automatic gauges. By

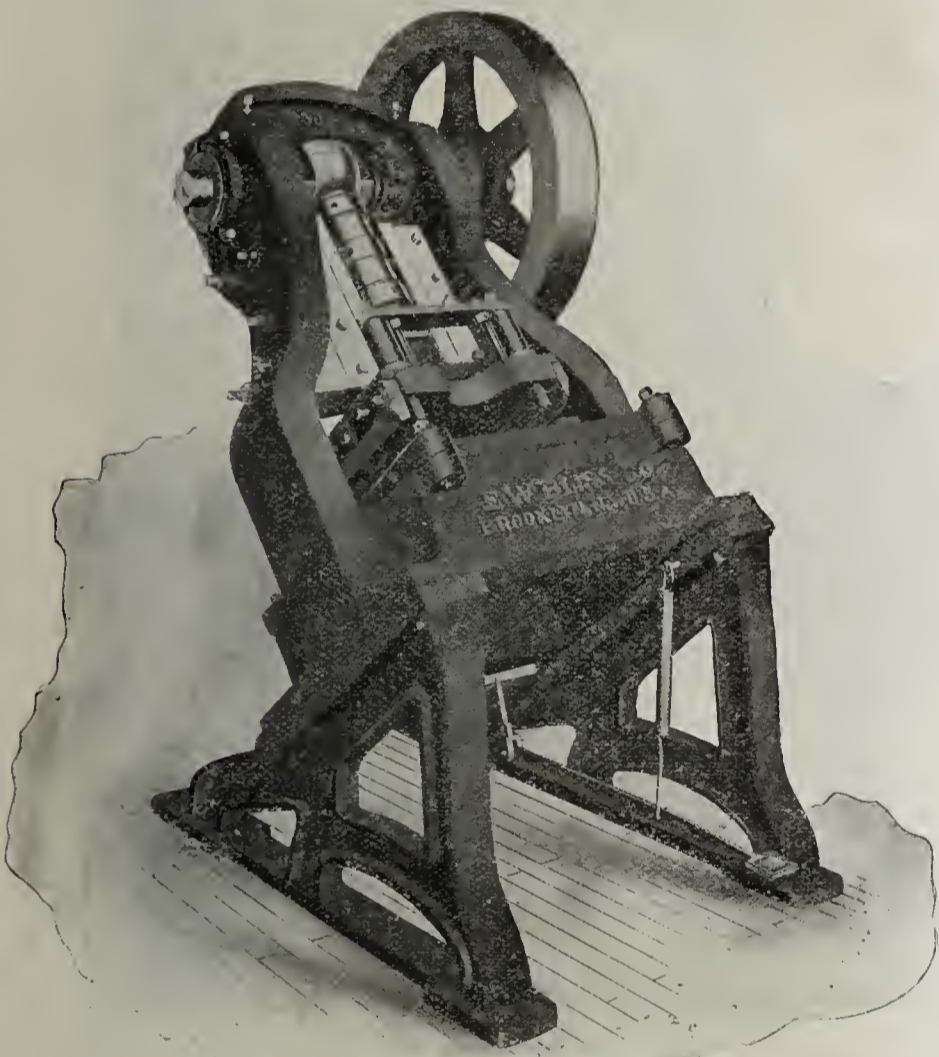


FIG. 13.

pressing the foot treadle, the machine is put into operation, and the trimming of the two ends and four corners is done at the same time with one stroke of the press. The automatic gauges then disappear, and the trimmed sheet slides by gravity through the back of the press.

The second step in the preparation of the body of the can is the turning over or "hemming" of the top and bottom edges of the trimmed blanks. This is done in the press (illustrated in Fig. 14). Here also the sheet is placed in the die, from which, after one stroke of the press has bent it up as shewn in Fig. 15, it slides in between the rolls at the back of the machine which set

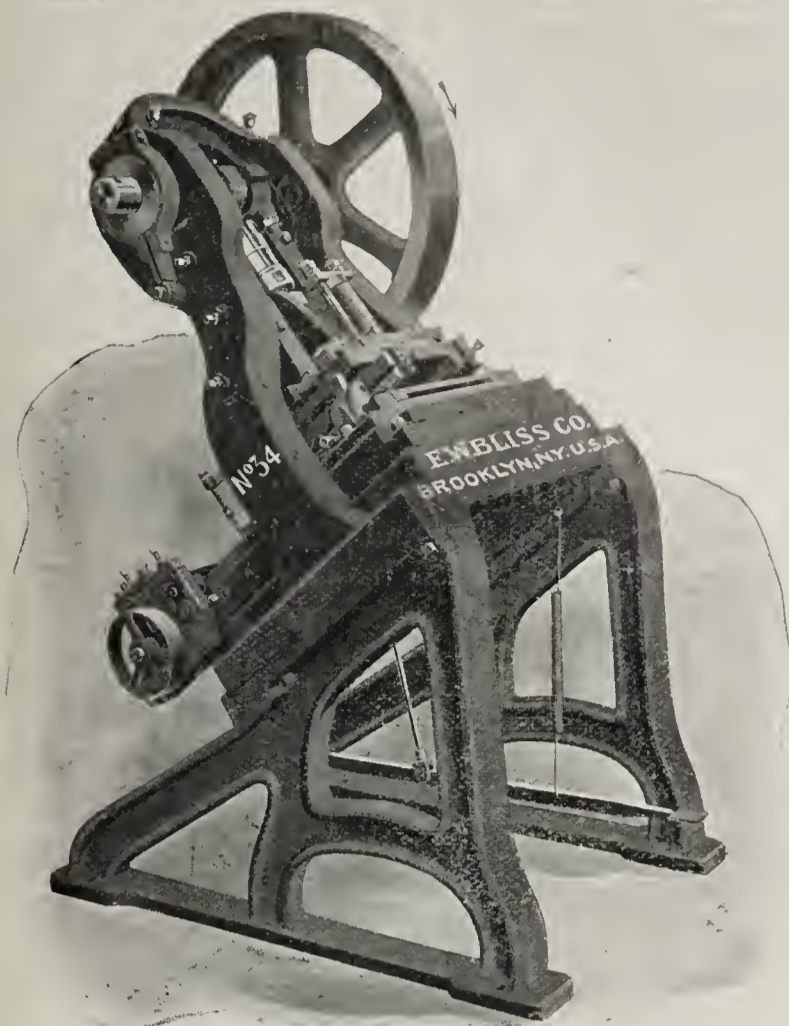
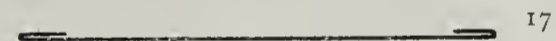
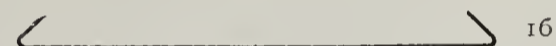


FIG. 14.

the edges down as illustrated in Figs. 16 and 17.



The next step to which the body blanks are subjected is carried out by the use of the machine

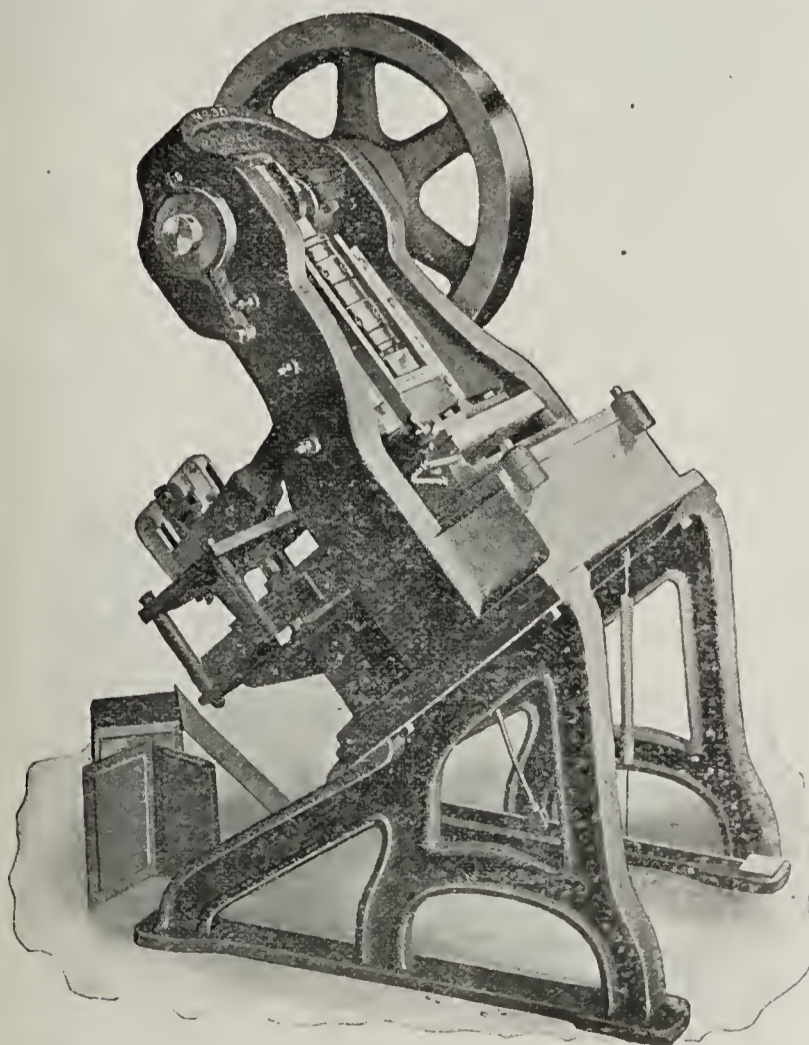


FIG. 18.

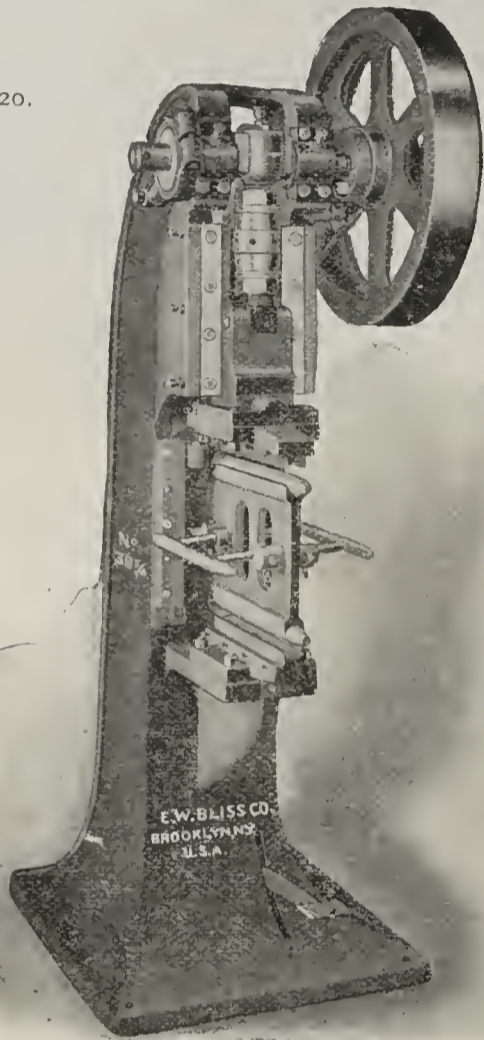
(illustrated in Fig. 18), in which the sides are panelled to ensure greater stiffness, the hooks are formed for the side seam, and the panelled blank is bent at right angles (as shewn in the Sketch 19). So perfect is this machine that all these three operations are performed at one stroke of the press.



FIG. 19.

The two body halves are then loosely hooked together by hand, and are pushed over the sliding horn of the press (illustrated in Fig. 20). The adjustable side gauges shewn secure accurate size and position of the can body. One stroke of the slide sets both side seams home; the

FIG. 20.



horn, being movable, has two working surfaces, the upper one is acted upon by a punch, bolted to the press slide, while the lower one, descending with the horn, acts against a stationary "force" fastened to the bed.

The body of the petroleum can is now finished, all now required being the attaching of the top and bottom, which requires the operation of a squeezing machine similar to that shewn in Fig. 21.

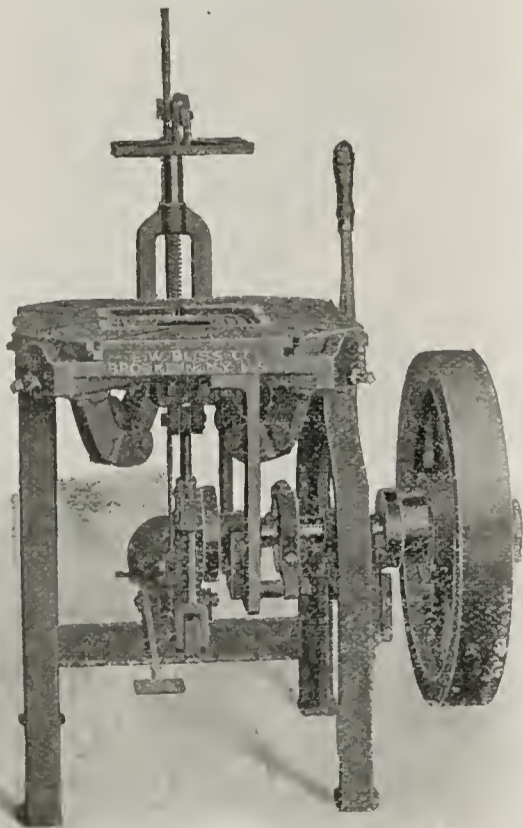


FIG. 21.

This machine operates as follows:—The top or bottom

having been formed like Fig. 9 in the machine first described, is placed over a plate in the centre of four slides which it fits snugly along surface A. The can body is then inserted as shewn by the dotted line. Pressure on the foot treadle holds the body securely in the recess "B" by means of the plate acting from above. When the can is in position, the hand lever is pulled forward, throwing in the clutch and causing the four slides to squeeze the edge of the can head securely on to the body, while the other end is handled in the same manner. To produce a neater and tighter seam, and also to reduce the amount of solder required, the can bodies are taken to the machine (given in Fig. 23), where the seam is compressed by a rolling operation.

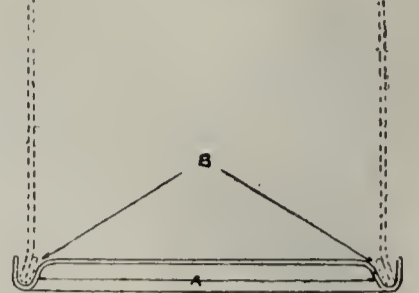


FIG. 22.

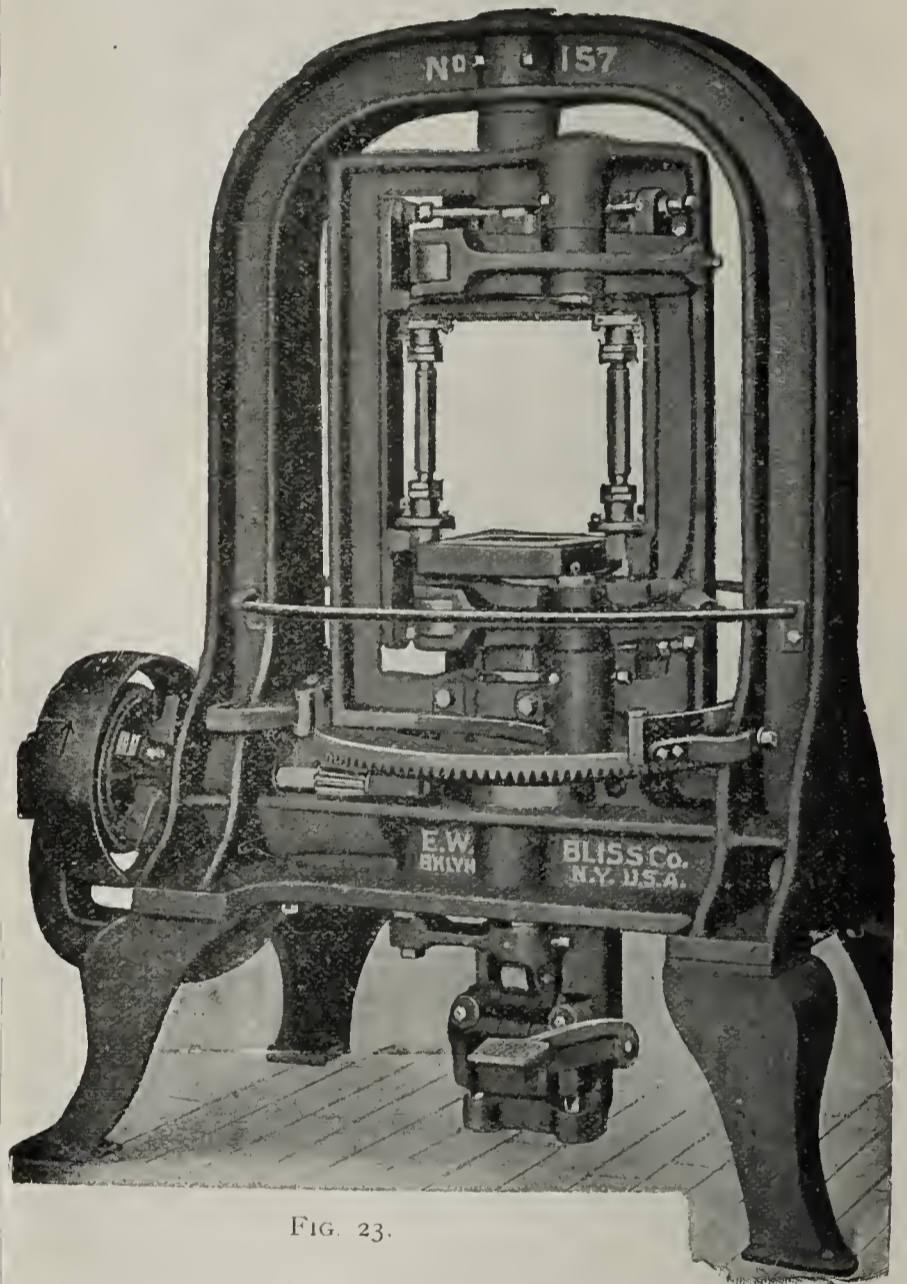


FIG. 23.

In this machine the can is firmly held between two chucks made to fit the can heads exactly, the upper chuck being mounted on a vertical shaft fastened rigidly to the upper part of the main frame, and the lower chuck to the vertical shaft passing through the lower part of the frame, and prevented from turning by an arm running in guides, but capable of a vertical motion imparted to it by toggle levers connected with the treadle. It will be noted that the can remains stationary, while the steel rolls which operate on the seams at the top and bottom are carried by a frame which rotates around the can upon the upper and lower stationary shafts. These rolls are mounted on levers pivoted in the rotating frame, the opposite ends of the levers being furnished with rolls bearing against star-shaped stationary cams on the two vertical shafts, which give the in-and-out motion required in passing around the corners of the square cans.

The rotating frame carries two sets of these rollers, which press on opposite sides of the can at both top and bottom, equalising the side pressure, and rolling the seams more perfectly than would be possible by the use of a single set of rolls, each seam being rolled twice in one revolution. There are additional

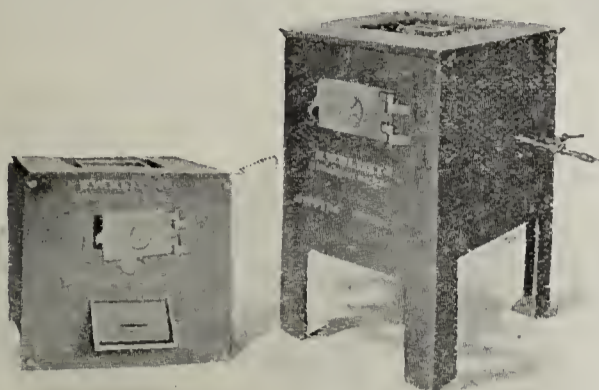


FIG. 24.

cams provided, which, as the machine comes to a rest, move the rolls outward from the surface of the can, and drop the lower spindle and chuck, so the can may be removable from the machine. Attached to the bottom of the rotating frame is a bevel gear meshing into a pinion on the pulley shaft. The pulley is provided with a friction clutch controlled by a treadle. A can being placed upon the lower chuck and the foot placed upon the treadle, the can is raised and clamped firmly between the upper and lower chucks; the clutch is thrown in, and the roller makes one revolution round the can, the latter remaining stationary. After completing one revolution, the clutch is automatically released, the rolls are thrown outward, and the lower chuck drops, leaving the can free to be removed. The capacity of this machine is from 9,000 to 12,000 five-gallon cans in ten hours. A very large saving in solder is effected by its use on account of the closely compressed seam it produces.

The operations already described complete the machine work on the petroleum can, which is now ready for soldering. The best method for soldering

the side seams is to use hand solder coppers, which may be heated by the fuel best suited to the location of the factory. For soldering the tops and bottoms of the cans, the dipping furnace has been found to be the most satisfactory and economical. The ends of the can are simply dipped into the solder bath, the shape of which is such that but a minimum amount of solder is used, and the work is quickly done. Fig. 24 gives a good idea of furnaces fitted for either solid fuel, oil or gas.

The petroleum can is now ready for filling, and this is done with the well-known automatic filler of the E. W. Bliss Company. This machine, which is illustrated in Fig. 25, will fill twelve five-gallon cans simultaneously. The measuring is done automatically, and one machine can fill on an average about 7,000 cans per day of ten hours. Leaving this ingenious machine the closing caps of the cans are affixed, and it is but the work of a few moments before

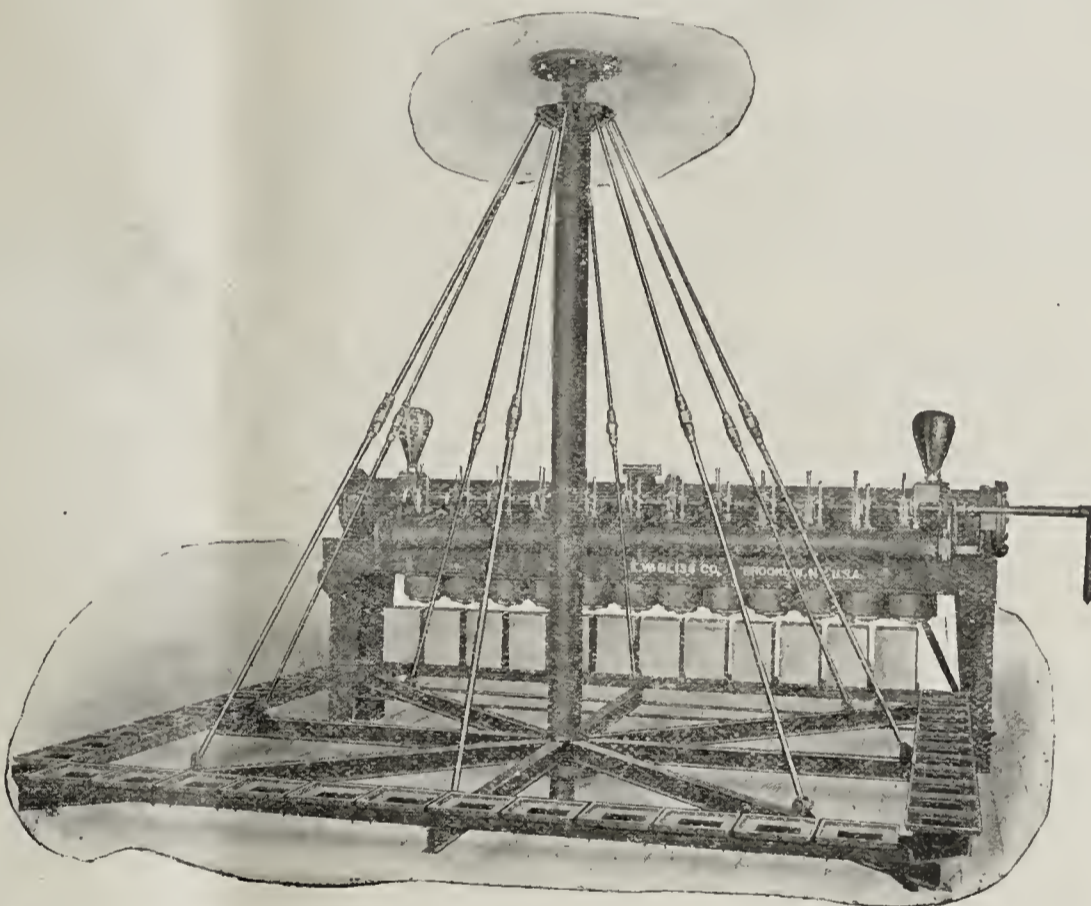


FIG. 25.

the can is ready to be shipped to all parts of the world.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO JULY 1st, 1907.

IN GALLONS.

[ALL RIGHTS RESERVED.]

COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since June 17.	From Jan. 1.	Since June 17.	From Jan. 1.	Since June 17.	From Jan. 1.	Since June 17.	From Jan. 1.	Since June 17.	From Jan. 1.	Since June 17.	From Jan. 1.	Since June 17.	From Jan. 1.	Since June 17.	From Jan. 1.
Austria ...	—	—	—	67,440	—	67,770	—	—	—	—	—	—	—	—	—	135,210
Belgium ...	—	153,410	30,995	306,315	—	—	—	310	—	4,000	—	—	—	590	30,995	404,625
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	—	—	—	—	—	—	—	1,555,350	11,399,260	—	—	—	—	1,555,350	11,399,260
Germany ...	5,285	1,159,725	35,200	738,910	—	2,000	—	—	—	80	—	—	—	3,100	40,485	1,903,815
Holland ...	—	1,020	—	9,710	—	—	—	—	—	341,400	—	—	—	75,930	—	428,060
Roumania ...	1,605,920	5,744,090	—	—	—	—	897,600	3,730,390	—	1,459,000	—	238,700	—	—	2,503,520	11,172,180
Russia ...	771,940	17,706,200	19,140	2,891,520	—	—	—	—	2,500	9,750	—	—	—	360	793,580	20,607,830
U.S.A. ...	4,154,700	48,113,400	1,283,120	18,396,955	—	448,690	1,709,000	25,925,550	—	2,420,420	1,200,000	4,141,650	8,350	849,160	8,355,170	100,295,825
Other Countries	—	950	1,670	28,720	—	—	—	—	—	2,500	—	40	4,250	5,090	5,920	37,300
	6,537,845	72,878,795	1,370,125	22,439,570	—	518,460	2,606,600	29,656,250	1,557,850	15,636,410	1,200,000	4,380,390	12,600	934,230	13,285,020	146,444,105

NOTES FROM ALL QUARTERS.

RUSSIA.

The St. Petersburg Petroleum Co., owning one petroleum property at Bebe-Aibat and another at Grosny, has concluded its eighth financial year 1906 with a loss of 24,000 roubles. The nominal capital is 960,000 roubles, whilst the properties are valued at 1,193,885 roubles.

The Tchimon Petroleum Co., of Ferghana, has obtained permission from the Russian Government to increase its capital from 2,000,000 to 2,500,000 roubles. The new shares will be issued at a premium, in proportion to the amount of the reserve fund of the company at the time of issue.

The Uchta Oil Field.—According to private reports, a prolific flow of oil has been struck in the Uchta oil field in the Petchora district in a well belonging to Messrs. Gansberg, Iogiches and Prince Mertchersky. The well is only 350 feet deep, and yields 100 poods daily by spouting, and about 500 poods by baling.

Prices on the Increase.—In view of the firm tone on the Baku oil market and the continuous advance in prices, chiefly in kerosene, the principal distributing firms have decided to raise the price of kerosene in the interior to 103 copecs per pood at Petrovsk, 110 copecs at Czaritzin, and other places according to distance.

A Much-Needed Reform.—The Baku Petroleum Association has petitioned the Minister of Finance and Commerce to grant a special export railway rate for ligroin or heavy benzine of a specific gravity between 0.715 and 0.765. This product has a great demand abroad for automobile purposes, but at Baku it has to be burnt as fuel, as it cannot be exported owing to the high railway rate.

The Science of Producing Petroleum.—The Baku section of the Imperial Russian Technical Society has instituted an annual prize of 1,000 roubles to be granted for the best scientific work or invention relating to the petroleum industry. The first year's prize will be for a work connected with the science of producing petroleum. Papers have to be sent in by the 25th of February (o.s.), 1908; the award will be announced on the 25th of May, 1908.

AMERICA.

Natural Gas Development.—The Columbia Oil and Gas Co. is now planning for developing and piping natural gas in Cabell county, West Virginia. The company's immediate available resources are said to be 200,000,000 feet of gas daily.

The Illinois Field.—A new shale sand has been discovered near Brocton in the Illinois field, with the result that leases are being snapped up by all and sundry. One remarkable feature of the new find is the shallow depth at which oil is encountered, averaging from 180 to 350 feet from the surface.

The Gulf Pipe Lines.—We have it on the authority of the *Bartlesville Examiner* that the whole of the Gulf pipe line and the Texas Companies' pipes for the Gulf line have been laid through Indian Territory. This portion of the work has been most rapidly finished, and now the workers have proceeded south.

Operations in Utah.—The Virgin River Oil and Development Co., which was organised a few months ago by Nevada capitalists, has started operations in the vicinity of Virgin, Utah. For more than 40 years the people of the district have known of the existence of oil seeps in the neighbourhood of Virgin, but up to a few years ago no steps were taken to develop the oil.

The Caddo Field.—According to a message from Shreveport, Louisiana, there is considerable activity now in oil operations in the Caddo field, the most important feature of the recent developments being the bringing in of the Hunter-Hughes well located near the first one sunk in the field. The well is flowing naturally, and producing over one hundred barrels per day.

A Boom in Oklahoma.—The *Oil, Paint and Drug Reporter* states that a great deal of excitement has been caused in Oklahoma, just over the river from Texas, on account of the opening of a new oil well that flows a quantity of oil many times larger than that found in any well previously drilled in the field. Companies are now being formed and leases secured with great rapidity.

Testing Round Glencoe.—The *Petrolia Advertiser* states that for some time past representatives of the New York and Western Consolidated Oil Co. have been leasing land in the locality of Glencoe for the purpose of drilling for oil. Arrangements are now being made to sink the first test in the township of Ekfrid, and the drillers are prepared to go 1,200 feet—a good depth for that district.

How's this for Enterprise?—A consignment of refined oil has recently been shipped from Philadelphia to Iceland. This is the first incident of the kind in the history of the American oil industry, and the risks of the venture have been taken up by the Standard Oil Co. Until the present time, Icelanders have depended upon the seals and whales of the Arctic regions for their supplies of grease products.

Canadian Activity.—A correspondent in the *Petrolia Advertiser* says that Sandwich East township, in the extreme western part of the peninsula of Ontario, will be the scene of considerable wild-cattling this summer. Walkerville, Windsor, and Detroit capitalists are now securing blocks of territory, and will start the work of development at an early date. Mr. Hiram Walker several years ago leased up considerable of this territory in this township, and spent a few thousand dollars in preliminary work, but the opening of the Leamington field caused him to abandon this part of Ontario to take hold of what seemed at that time to be more promising territory. The new company will take up the work abandoned by Mr. Walker.

ROUMANIA.

The Vega Refinery Co. earned during last year a net profit of 364,649 francs. After writing off 240,000 francs for reserve and depreciation, a dividend of 5 per cent. will be declared. The capital is to be increased to 5,000,000 francs.

The Credit Petrolifer has earned in the financial year 1906-7 a net profit of 452,285 francs, against 194,104 francs in the preceding year. A dividend of 7 per cent. will be distributed, and 380,000 francs will be written off for reserve fund. At the forthcoming meeting the capital will be increased to 6,000,000 francs.

The Bustenari Co.'s Profit.—The Bustenari Co. has earned in the financial year 1906-7 a net profit of 3,124,435 francs, against 1,282,548 francs earned in the preceding year. It was resolved to distribute a dividend of 8 per cent., and write off 700,000 francs for reserve fund and 1,100,000 francs for depreciation. The crude oil production in 1906-7 was about 130,000 tons, against 103,871 tons in 1905-6, and 76,905 tons in 1904-5.

A Chance for England.—The Roumanian refiners have complained to the Minister of Domains and Commerce that the Roumanian acid manufacturers are unable to supply them with sufficient sulphuric acid required for petroleum refining, and they are therefore compelled to import it in large quantities. The refiners therefore ask the Minister to grant them an exemption of import duty on sulphuric acid, and their request will probably be granted.

The Moldavia Deposits.—The Roumanian Academy has announced that it will grant a prize of 5,000 francs for the best work on the petroliferous deposits of Moldavia. The work will have to contain an exhaustive investigation of these deposits, and consist of two parts—one dealing with the geology, stratigraphy and tectonic of the deposits, and the other dealing with the chemical composition of the oil of those deposits, and the nature and proportion of various products to be obtained from it.

Production by Firms.—The following are the preliminary figures of the production, in tons, during May of some of the leading firms, compared with the corresponding figures for April:—

	April.	May.
Steaua Romana	31,784	28,271
Bustenari Co.	11,260	12,103
Telega Oil Co.	4,135	4,536
International Co.	3,442	3,581
Trajan Co.	3,717	4,315
Colombia Co.	2,180	2,361
Aquila Franco-Romana Co. ..	1,389	1,351
Pleyte and Co.	1,489	1,860

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SATURDAY, JULY 6TH, 1907.

ROUMANIA'S PROGRESS AND THE LESSON IT TEACHES.

I HAVE just returned from a lengthy stay in Roumania, that country whose progress in regard to the development of its petroleum industry is one of the most remarkable in the pages of recent history. While there I made a thorough inspection of the oil fields, paid a visit to the more important refineries, and shortly before my departure for England I was enabled to gather valuable data not only concerning the progress achieved of late, but unmistakable evidence was put before me to prove the sincere interest which the Government of the country takes in the proper development of this now very important branch of international commerce. While others have lagged behind, Roumania has been on the *qui vive*. An open hand has grasped all the opportunities as they have offered themselves, and as in other industries so with that of petroleum production and refining, remarkable progress has been made, and it was this fact which impressed me most.

In the near future I intend to devote some space to detailing the progress made in the Roumanian petroleum industry during the past decade, but for the present I

will content myself by placing before the readers of the REVIEW a few salient points, which have left a lasting impression upon my mind. A good example is worthy of being followed, and my only regret is that so far, Roumania's progress has not carried home its lesson across the waters of the Black Sea to the Caucasus—the home of the Russian petroleum industry—where the lesson taught could be applied with great advantage to almost every class of the community from the Government downwards.

In past issues of the REVIEW I have on more than one occasion, endeavoured to impress upon the Russian Government, as well as the petroleum producer and refiner, the necessity for looking around and adopting those principles which have been the fundamental basis of the permanent progress achieved by other petroleum producing countries. In this respect, I have put forward America as an example worthy of being closely copied—a country in which an international industry has sprung up and developed consequent upon its being entirely free of Governmental restrictions, and being carried on by men whose interest in the petroleum industry is nothing if not practical. As is well known, since the far off time when a mere handful of men engaged in the business of producing petroleum in the States, there has been consistent progress which has become the more marked as time has passed, until to-day there are in America few branches of international commerce so important as that of petroleum.

But there remains no longer the need for Russia to take to heart the lesson from America; she has only to look to her neighbour—Roumania—in order to have convincing proof of what can be done in the way of progress when once a branch of a nation's commerce receives the support of the Government, and is not always under threat of being strangled by proposals more or less of an impossible nature. Seeing is believing, but without seeing, I am rather afraid my readers can have but a very vague idea of the importance of the lesson which Roumania is capable of teaching her older petroleum producing country Russia. Roumania's progress on the one hand, and Russia's retrogression on the other, are striking evidences of the power of a government to either make or mar its industries and commerce. Both countries alike have vast mineral resources, but whereas in the case of Roumania, the Government is determined to do all in its power to promote development for the benefit of the nation at large, the Russian petroleum industry struggles pitifully on, groaning under the load which an unreasonable Government refuses to remove.

Roumania has recognised that, if permanent progress is to be made, the greatest possible freedom must be given to those engaged in the petroleum industry, and at the same time the industry itself must have that assistance from the Government it has a right to expect. It must not be hampered either in this way or that, but everything conducive to a healthy development must be adopted without counting the cost. Thus to-day we see that in order to bring about open competition in all that appertains to oil-field machinery, the Roumanian

Government has removed all taxes upon such apparatus imported from foreign countries, while to stimulate the refining industry, all necessary materials enjoy a similar freedom from taxation. Then again low railway freights have been brought into general vogue for all petroleum products, and just lately, in order to assist export to the furthest possible point, railway rates have been still further decreased. Recollecting all these advantages which the Roumanian petroleum industry enjoys, it is no surprise that its growth has been so consistent, and its volume of trade ever on the increase.

If only Russia would take to heart the lesson taught by enterprising Roumania, what a vast change we should almost immediately perceive! The unexpected sometimes happens, and I must admit that I am not without hope in this instance. The coming Bucarest Congress will perhaps do much. In the programme which I have had the privilege of glancing at some weeks ago, I notice that it is the intention of the Committee, by arranging numerous visits to the oil fields, as well as an excursion to the Roumanian export ports, to impress upon the delegates the healthy atmosphere in which the Roumanian petroleum industry lives, and it is not too much to hope that the impression which will be formed upon the minds of some of the delegates may result in the lesson which Roumania is capable of teaching being taken thoroughly to heart by countries less enterprising, yet quite as rich in mineral resources.

P. DVORKOVITZ.

THE ANGLO-SAXON PETROLEUM COMPANY.

The Anglo-Saxon Petroleum Co., Ltd., was registered a few days ago with a capital of £4,000,000 in £10 shares (240,000 "A" and 160,000 "B"). The objects of the company are to carry on the business of producers, refiners, storers, transporters, suppliers, sellers, and distributors of petroleum and other oils and the products thereof, dealers in any kind of mineral, animal, or vegetable oil, wharfingers, merchants, carriers, ship-owners, lightermen, bargeowners, factors, brokers, owners of oil-bearing lands, constructors of tanks, reservoirs, pipe-lines, refineries, laboratories, stores, and other buildings, works, and conveniences, etc.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 4th July, 1907, as follows:—

The demand for tin plates is quiet, as is usually the case at this season of the year, but the mills are fully employed, and prices are unchanged and steady, as below:—

1C	18½ × 14	124 sheets	110 lbs.	15/7½ to 15/9 per box.
1C	19½ × 14	120 "	110 "	15/7½ to 15/9 "
1C	20 × 10	225 "	156 "	21/9 to 22/- "

F.o.b. Wales. Tin lining and iron hooping extra.

The Heywood Company's Dividend.—The Heywood Co. has just paid its twenty-third dividend, making a total of 79 per cent. paid to the stockholders since October, 1901.

THE ROYAL DUTCH PETROLEUM COMPANY.

THE ANNUAL REPORT.

The annual report and balance sheet of the Royal Dutch Petroleum Co. has recently been issued, in which the directors declare a dividend of 73 per cent. upon the ordinary shares and 4 per cent. upon the preference shares.

The report submitted by the managers to the directors concerning the operations at the oil fields, etc., contains many interesting features. The production of crude oil amounted during the year to 593,360 tons, this having been drawn from North Sumatra, 247,843 tons; the fields in Palembang, 255,799 tons; and from the Borneo oil fields, 89,718 tons. During the year the refinery at Pangkallan Berandan worked regularly, this refinery handling the crude oil from North Sumatra and also the oil from Borneo. During the year the paraffin works have been extended, and now the managers hope to obtain a monthly production of 500 tons of paraffin. A candle factory is also being added to the refinery, and it is estimated that the monthly capacity of this refinery, when in full working order, will be 50 tons of candles.

The production from the Perlak oil fields has remained very satisfactory. During the year several new drillings have been completed, while, as a result of pipe-line improvements, a considerably increased production has been obtained from various wells formerly sunk. The production from the Perlak fields during the year amounted to 230,719 tons. The production of oil from Telaga Said has remained stationary, amounting during the year to 10,270 tons, while the production of the Pedawa fields was 4,423 tons. Notwithstanding energetic exploration in the Tjoenda and Sawang districts, no success has been obtained there. In their previous report the managers say that they wrote to the effect that they had been forced to suspend drilling on Kroeng Bare, but soon afterwards they found themselves obliged to stop exploration also at Kroeng Djawa as the results of drilling were unfavourable, while finally they had also to suspend exploration in the Sawang district.

Proceeding to deal with the tank installation the managers state that this was enlarged during 1906, and now has a total capacity of 44,605 tons. The refinery at Pladjoe has worked regularly during the year, but the company has obtained control of the refinery of the Moesi Ilir Petroleum Co. in consequence of a contract entered into with that company.

One very interesting portion of the report is that detailing the quantities of the various products consigned and sold during the past year. Of kerosene, according to the previous report, there remained unsold in the hands of the Asiatic Petroleum Co. 87,316 tons, but during 1906 there were consigned 276,208 tons, making a total of 363,524 tons, of which quantity there was sold 272,954 tons, leaving a balance at the end of the year of 90,570 tons.

Of benzine, 125,916 tons were consigned to the Asiatic Petroleum Co. in 1906, which, with the stocks already on hand, made a total of 166,139 tons, but from this

quantity there was sold during the year 109,669 tons, leaving a balance on December 31st of 56,470 tons.

In regard to liquid fuel, according to the previous report, the Asiatic Co. had on hand 4,653 tons, but in consequence of a modification in the settling of the account, this quantity was increased to 4,726 tons, while 2,391 tons have been consigned during 1906, which after the year's sales left a balance of 1,536 tons.

During 1906, 215 tons of solar oil were consigned, and of this quantity 170 tons sold. Some 2,800 tons of paraffin were consigned to the Asiatic Petroleum Co. last year, and this was the quantity approximately sold, so that the balance in hand—about 820 tons—is the same as a year ago. The stocks of Borneo distillate in the hands of the Asiatic Co. shew some increase, standing at 1,842 tons at the end of last year, as against 1,134 tons at the close of 1905, thus shewing that of the 3,600 tons consigned during the year, several hundreds went into stock.

The report then goes on to speak of the reasons leading up to the amalgamation between the Royal Dutch Co. and the "Shell" Transport and Trading Co. Here are the exact words:—

The improvement in prices, which had begun during the last quarter of 1905, were maintained during the past year.

Prices for kerosene were as a rule very satisfactory whilst those for benzine, notwithstanding our increased production especially in the second half of last year, ruled higher all the time.

On account of these reasons our financial results are considerably better than they were last year.

In the meantime the desirability was felt more and more of a closer connection with the second important Netherlands Indian producer, the "Shell" Transport and Trading Co., Ltd., and the concern affiliated to her, the Netherlands Indian Industrial and Trading Co. (Nederlandsche Industrie and Handelmaatschappij), which works large oil fields in Borneo.

As has been shewn in the report for 1903, an understanding had been arrived at with these two companies as well as with other concerns regarding the sale of products, but each company managed its own concern, independent of the other ones, even though the proportion of its output was arrived at by mutual agreement.

A result hereof was a clashing of interests, which made itself even more felt, since the production of crude oil as well as of manufactured products increased considerably in both concerns. This diversity of interests not only interfered with a good working of the agreement, but also stood in the way of a more economical exploitation and both parties were continually compelled to make expenses, where, with co-operation, the expenses made by one, might have served for both.

With this end in view preliminaries were opened long ago, but matters were discussed more fully during last

year, and in the autumn of 1906, an understanding was come to on the principal points under discussion.

In our circular letter of March 12th, 1907, addressed to our shareholders, we explained fully what had resulted from these negotiations and in the extraordinary general meeting of shareholders of April 23rd last, the principles on which the amalgamation of both companies would take place, were approved by our shareholders, as well as modification of our articles of association on strength of which the authorised capital was increased to 50,000,000 francs in common shares.

The Royal sanction on our new articles of association was granted by decree of May 29th, 1907, whilst this sanction on the draft-articles for one of the new companies, in which the amalgamation will be incorporated, viz., the "Bataafsche Petroleum Maatschappij," may be expected shortly.

According to the agreement, the amalgamation will be looked upon as having come into force on January 1st, 1907, which means that our company has entered into a new phase on that date.

Looking backward on the period that lies behind us and that has come to a close with the new phase this company has entered into, we have every reason to be satisfied with the results thus far obtained, even though we fully realise that the dividends we have given were calculated on a nominal capital, much smaller than the amount that has been gradually brought in to our company in money and valuable assets, and if we take these assets into consideration, then surely the dividends would shew much lower figures.

A considerable part of the above-mentioned capitals, gradually brought into our company, has been invested in our distributing business (tanks, ships, etc.), and it may be attributed to this policy that, notwithstanding the price of refined oil has, since we started work, decreased considerably nearly everywhere, we still may point at favourable results.

The history of our and other concerns has shewn clearly that the possession of good, productive oil fields, even under first-rate technical management of the exploitation, is not in itself sufficient to make a paying concern.

A considerable part of the profits are due to the commercial and distributing branch of our concern, which we were able to work in combination with others, as well as to the interest we obtained, as a result hereof, in oil fields in other parts of the world.

THE DEUTSCH-AMERIKANISCHE PETROLEUM GESELLSCHAFT.

The Deutsch-Amerikanische Petroleum Gesellschaft is the representative of the Standard Oil Co. in Germany, and has its head office in Hamburg. The accounts recently published shew that in 1906 the company earned a gross profit of 4,083,562 marks, against 3,010,326 marks in the preceding year. After writing off under various heads, altogether a sum of 2,390,587 marks (against 2,105,241 marks in the preceding year), there is left a net profit of 1,692,975 marks (against 905,084 marks in 1905).

The following are a few of the more important items in the balance-sheet on 31st December, 1906, compared to 31st December, 1905:—

	31st Dec., 1906. Marks.	31st Dec., 1905. Marks.
Cash, including bills, securities and shares	14,159,920	13,325,555
Petroleum oils, barrels & packages	16,427,311	14,301,037
Lands, building and installations, including machinery & appliances	8,784,126	8,422,900
Means of transport	10,280,581	10,686,539
Sundry materials and goods ..	1,328,063	1,110,175
Sundry creditors	43,041,980	39,383,938

Among the creditors are the holders of debentures for 19,000,000 marks entitled to a rate of interest equal to the dividend declared each year. The amount of interest due on these debentures is not included in the net profit mentioned above.

The share capital is 9,000,000 marks, the reserve fund 3,000,000 marks, and the insurance fund 2,000,000 marks. The net profit earned represents a return of 19 per cent. on the share capital, but no announcement has yet been made as to the manner in which the profit will be disposed of.

NEW COMPANIES.

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Registered with capital of £15,500, divided into 15,000 ordinary shares of £1 each and 10,000 deferred shares of 1s. each, to acquire any lands, farms, properties, mines and minerals, bituminous, oil and other properties in Africa or elsewhere, and to carry on the business of petroleum, oil, bitumen and general miners, refiners, explorers, prospectors, etc. No initial public issue. The subscribers are to appoint the first directors; qualification, 100 deferred shares; remuneration, £150 each per annum and 10 per cent. of the surplus profits after 20 per cent. has been paid on the ordinary shareholders' dividend.

EGYPTIAN OIL TRUST, LTD.

Registered by Messrs. Light and Fulton, 1, Laurence Pountney Hill, E.C. Capital £100,000, in £1 shares. Objects: To acquire oil concessions in Egypt or to take up options for the purchase of such concessions; to explore and develop the lands the subject of such concessions, and to carry on the business of winners, refiners, storers, suppliers and distributors of petroleum, manufacturers of and dealers in petroleum products, chemical manufacturers, etc. Registered office, 19, Basinghall Street, E.C.

THE ARCHANGEL PETROLEUM COMPANY.

Registered with a capital of £50,000, in £1 shares. The objects of the company are to carry on in Russia or elsewhere the business of winners, refiners and manufacturers of and dealers in petroleum and other mineral oils and the products thereof. The signatories include:—Messrs. W. Koch, Hatton Court, E.C., 250 shares; F. Lane, 26, Great St. Helens, E.C., 250; and W. R. von Ofenheim, 28, Bishopsgate Street Within, E.C., 250. No initial public issue. First directors (not less than three nor more than seven): W. Koch, F. Lane and W. R. von Ofenheim. Remuneration, 10 per cent. of surplus profits after providing for 6 per cent. on issued capital divisible. 28, Bishopsgate Street Within, E.C.

THE OIL FIELDS OF TRINIDAD.

Another Valuable Geological Report.

(Continued from page 354.)

Proceeding north-eastward along the crest of the anticline, the flexure opens out gradually disclosing lower and lower beds along the crest, and estuarine rocks make their appearance from below the clays. Then, when a still lower band of coverclay is laid bare, comes the "Devil's Woodyard," the last indication of importance observed in the area mapped on this anticline. The "Devil's Woodyard" is a well-known mud volcano of large size; it is seldom active, but when an eruption takes place it seems to be generally very violent, I am informed that in 1888 or 1889 there was a notable outburst. When this locality was visited in 1904 only a few small gas-pools and washed-down clay cones were visible, the whole being more or less overgrown with bush. On April 11th, 1906, after a few weeks of very dry weather, a violent eruption took place and mud was hurled above the tree tops. When visited recently (January, 1907) the area of barren mud was found to be 100 yards in diameter, its level was considerably raised, and all traces of vegetation had been swept away or buried. A score of small cones, chiefly in the centre of the area, were giving off a little gas with a trickle of muddy water, but no appreciable quantity of oil. Some fragments of nodules and of fossiliferous limestone, evidently brought up from underlying strata, were found on the surface. This mud volcano lies exactly upon the crest of the anticline, and shews that enormous gas-pressure must be gradually accumulated in the underlying oil-bearing strata.

North of the northern anticline there is much evidence of oil-bearing conditions which must not be passed over. Leaving out evidence from the upper tertiaries, which will be treated of later, we find along the coast-section from Aripéro River to San Fernando many outcrops of petroliferous strata.

Many years ago a French company attempted oil development work in Aripéro estate, but operations were abandoned before any very successful results were attained on account of the unhealthiness of the locality at that time. The Oil Exploration Syndicate of Canada took up the work in the same locality in 1900 and drilled a well to a depth of about 600 feet. The well appears to have been located on account of an asphalt deposit in the neighbourhood, but it seems probable that this asphalt, which issues from the outcrop of sands of the Upper Tertiaries, which overlie the older clays and marls at this point, may have no connection with the older strata, but may be derived from an extension of the La Brea oil sand. The well was drilled almost entirely in marls and clays; no regular log of it was kept, but a series of specimens from depths between 88 and 418 feet have been submitted. The dips of the Middle Tertiaries in the neighbourhood are steep, so comparatively thin beds would occupy a considerable distance in the boring. From 88 to 175 feet the boring

was through clays, brown and purple in colour, from 216 feet to 361 feet the boring was chiefly through marls, while bluish and pale clays appear from 372 to 405 feet. At 418 feet pale marly clays appear again. Oil was struck, but not in great quantity, and there is no clear record of what depth the oil principally came from. It is probable that several thin oil-bearing beds were passed through, one probably between 80 and 90 feet, another probably somewhere near 180 feet, and perhaps another between 350 and 370 feet.

The well is at present full of water and oil, and gas bubbles slowly through the column of liquid.

An analysis of the oil by the Government analyst gives the following results:—

Specific gravity	'935
Mineral matter	'04 per cent

The sample, which had been exposed in open cask to sun and air for six weeks, and had in consequence lost the greater part of its light oils, yielded on distillation:—

Petroleum spirit	1'0
Illuminating oil	43'0
Lubricating oil	38'0
Residual bitumen	18'0
	<hr/>
	100'0

The well, if carried much deeper, might have yielded better results, but, as has been noted above, the oil-bearing rocks seems to be splitting up and thinning out in this direction.

The coast section in the neighbourhood, however, gives striking evidence of the presence of petroleum; marls and clays similar to those pierced in the Aripéro well form nearly all the sections, but wherever more porous beds, either calcareous or sandy, are exposed, they are found to be impregnated with oil, while even in some of the dark clays the joints or slip-planes are coated with sticky oil. East of the mouth of the Aripéro river there is an oily scum over the surface of the water and all the rocks exposed have a distinct odour of petroleum. A submarine spring of petroleum is noted on the Admiralty Chart in this neighbourhood, but I have not been able to locate its exact position.

In the coast section further eastward the dips of the marls and clays are usually very high, and are much disturbed by landslips. Thin bands of limestone impregnated with oil occur here and there, but there are no oil sands. At one point where the unconformable Upper Tertiary descend to sea level, gas from an oil-bearing band in the older strata is evolved slowly through the lowest beds of the Upper Tertiaries.

At the Godineau river the hard marl bands are all slightly bituminous.

In the coast section between Mosquito Creek and Ally Creek, thin beds of oil-bearing sands, seldom more than six inches in thickness are observed here and there, and in the dark clays impregnation with oil is not uncommon. This section is very similar to that from San Fernando to Cipero river, where, as mentioned in the

report on the San Fernando Manjak field, thin oil sands and impregnated clays also occur.

None of these indications, however, seem to be of any importance, and may be regarded as the last signs of oil-bearing conditions. Traced inland, where exposures are few, none of these small oil-bearing bands have been identified; none of them are large enough to cause an asphalt deposit to be formed on its outcrop, and it may be that many of these petroliferous strata have been impregnated from other sources, possibly from later deposits which have been removed since by denudation.

The evidence of oil north of San Fernando has been dealt with in the report on the San Fernando Manjak field and need not be repeated here. The presence of manjak points to the occurrence of oil-bearing strata at greater depths.

(iii.) The evidence of oil among the Upper Tertiaries is confined to the area north of the northern anticline, including the Pitch Lake and its environs.

The famous Pitch Lake, in many ways the most important and most remarkable evidence of the presence of petroleum in the colony, demands special consideration. In view of the number of theories advanced to account for its origin and the number of controversial questions that have arisen in regard to it, it is necessary to record the available evidence to explain the phenomenon of its occurrence in somewhat greater detail than would otherwise be required.

For descriptions of the lake itself, its size, position, and the quantity of asphalt which has been won from it, reference may be made to the report of the Asphalt Commission or the report of the Inspector of Mines, which give the latest information on these subjects. Of the numerous theories as to origin, and writings on the subject generally, it is only necessary to refer here to the report on the Geology of Trinidad by Messrs. Wall and Sawkins, the report of the Asphalt Commission by Professor H. Louis and Mr. Gordon, and the "Modern Asphalt Pavement" by Mr. Clifford Richardson.

Messrs. Wall and Sawkins call attention to the distribution of asphalt within the colony and to the manner in which it is extruded, regarding the pitch Lake merely as the greatest and most striking example of a common phenomenon, but they make no attempt to explain the origin of the cavity which contains the asphalt or to point out the special local conditions which operated in this particular instance. They favour the view also that bitumen is being formed at the present day, at or very near the surface, from vegetable matter, an untenable theory founded on incorrect data.

Messrs. Louis and Gordon state three theories to account for the formation of the lake.

(1.)—That it is of volcanic origin.

(2.)—That the asphalt is ejecta from some huge subterranean deposit of asphaltic oil.

(3.)—That though derived from asphaltic oil, the asphalt has percolated into certain subterranean reservoirs which have in the course of time been laid bare by denudation.

The first theory they dismiss briefly; the second they

dismiss on theoretical grounds. To the third they incline to subscribe, though admitting the difficulties involved, and stating that "only a guess" can be made as to the origin of the lake.

Mr. Clifford Richardson, to whose work we are greatly indebted for much careful and lucid description of the characters of Trinidad asphalt, frankly accepts the origin of asphalt from petroleum, but suggests that the cavity occupied by the lake is the crater of a former mud-volcano, presumably in the solfataric stage.

Thus there is a consensus of opinion upon some of the main points, but divergences of view as regards other matters of equal importance, and to bring into line the work of previous writers new and more complete evidence is required. Such questions as of origin and mode of formation cannot be settled upon theoretical grounds, the field evidence alone must be considered; though obscure in places, it is sufficient to settle all doubtful points.

The true mode of origin of the Pitch Lake lies somewhere between the second and third theory mentioned by Messrs. Louis and Gordon.

The fact that asphalt, in contradistinction to manjak and its congeners, is a surface deposit, appears occasionally to have been lost sight of; the manner in which it accumulated hardly requires explanation, the only difficulties lie in proving how the cavity which it occupies was formed, and how the bitumen became emulsified with water and mineral matter.

True basins, such as that of the Pitch Lake, are rare in nature, and are only formed under certain well defined conditions, the most common modes of formation being by

- (1.)—Glacial action.
- (2.)—Chemical solution.
- (3.)—Subsidence during earth movement, and
- (4.)—Volcanic action.

The first two modes are obviously absurd in this connection; the third is disproved by the fact that the Pitch Lake occupies the crest of an anticline, obviously of comparatively recent formation as it affects some of the youngest of the Tertiary rocks. Volcanic action in the strict sense of the word is also inadmissible, as there is no sign of vulcanicity in any part of Trinidad, but if the term be extended to include mud-volcanoes, the explanation may be accepted.

Mud-volcanoes are essentially discharges of gas through disintegrated material capable of forming mud in the presence of water, and of such, two varieties may be distinguished, viz., fumaroles in volcanic districts, where the gradual decay or cessation of true volcanic action is sometimes marked by what is called the "solfataric stage," and mud-volcanoes such as those of Trinidad which are entirely due to the evolution of gas from underlying oil rocks.

From Mr. Clifford Richardson's allusions "thermal waters" and his theory that the silica in lake pitch has probably been in solution, it appears that he favours the view that something akin to solfataric action has at one time taken place on the site of the lake. The evidence from the composition of the asphalt and the microscopic characters of the inorganic constituents, so admirably described by Mr. Richardson, fail to confirm this view, and, in fact, distinctly prove that we are dealing with the phenomena appropriate to the gradual laying bare of an oil-bearing sand.

(To be continued).

Petroleum Consumption in Austria-Hungary.

. . . From "Naphta" by Dr. Bartoszewicz. . .

One of the chief causes hindering the development of the petroleum industry in Austria-Hungary is the high tax on petroleum consumed in that country. This duty was established in 1832, and was then 13 kronen per 100 kilos., thus raising the price of oil to the consumers by 13 hellers per kilogram, and therefore adversely affected the growth of the petroleum consumption in the country. During the last 11 years the following quantities of petroleum were consumed in Austria-Hungary:—

	Tons.		Tons.
1896	210,867	1902	241,754
1897	219,322	1903	242,124
1898	223,402	1904	240,019
1899	213,748	1905	236,947
1890	214,064	1906	245,288
1891	214,609		

The above figures shew that during the period given the consumption of petroleum in Austria-Hungary has remained practically stationary. The only case of any substantial increase was in 1902, namely, by 27,000 tons. This was the year when there was no cartel of petroleum refiners, and lower prices ruled that year; here, we have a clear proof of the direct connection between prices and consumption. It is further interesting to note that in the following year the increased consumption was maintained, although the cartel had since been re-established. This further proves that any gain in consumption achieved by low prices is not lost even after prices return to their former high level. It may be mentioned that during periods without the cartel, the retail prices decline but slightly compared to the reduction in the wholesale prices, the largest part of the reduction being appropriated by the dealers, whilst the refiners have been losing heavily by competing among themselves. A lasting and continuous increase in the consumption could be secured only by a reduction in the tax on this product. The State would not suffer any loss of revenue, but, on the contrary, would gain from the increased consumption of this product, which would

also assist in the material and intellectual development of the population. Even the Italian Government, which has been chronic in financial affairs, has appreciated the correctness of this view and now reduced the import duty on petroleum, with the object of increasing its consumption in Italy.

To shew the effects of petroleum taxation on consumption of this product the author cites the example of other countries. In Austria, with a tax of 13 kronen per 100 kilos. the consumption per head of population is about $4\frac{1}{2}$ kilos. per annum. A lower consumption of petroleum can only be found in Spain, Italy and the Balkan States, which is sufficiently explained by their southern climate. In Italy account must be taken of the very high import which was in force till now, namely, 48 lire per 100 kilos., in addition to an inland tax of $15\frac{1}{2}$ lire, which together kept the consumption down to the very low figure of $3\frac{1}{2}$ kilos. per head per annum. This year the import duty was reduced to 24 lire, and this will no doubt result in an increased consumption. A comparison, however, of Austria-Hungary with the North European countries in respect of taxation and consumption of petroleum shews very unfavourably for the latter.

There are in Europe countries where there is neither import duty nor inland tax on petroleum. These happy countries are England, Belgium, Norway and Sweden. In Sweden the average consumption of petroleum amounts to 12.8 kilos. per head, or nearly three times as much as in Austria-Hungary; in Norway it is over 20 kilos., or nearly five times as much as in Austria, and is increasing steadily from year to year, for in 1896 it was only 15.6 kilos. In Belgium the petroleum consumption is also about 20 kilos., whilst in England it is about 15 kilos.

In Switzerland there is an import duty of $1\frac{1}{4}$ francs per 100 kilos. and no inland tax. The petroleum consumption in that highly civilised country, where,

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thanks to cheap water power, electricity is largely used, amounts to 24 kilos. per head.

In France the import duty on refined petroleum is 12½ francs (11½ kronen) per 100 kilos., whilst on crude oil it is only 8.57 kronen. Thanks to the differential duty for crude oil a refining industry has sprung up in France based on the importation of an oil containing 95 cent. of refined oil. Thus in actual fact the import duty on petroleum is by 4 kronen lower than in Austria-Hungary. The average consumption of petroleum is 11.5 kilos. per head.

In Germany there is no inland tax on petroleum, and the import duty is 7½ marks or 9 kronen per 100 kilos., which is by 4 kronen less than the Austro-Hungarian tax. The petroleum consumption is 14 kilos. per head, and increases regularly every year by 5 per cent.

It would be erroneous to suppose that the consumption of petroleum is kept low in Austria-Hungary by the successful competition of gas and electricity, the latter forms of lighting are not used more widely there than in other European countries. The only cause is in the heavy taxation, and the author is of the opinion a reduction of the tax on petroleum by 4 kronen per 100 kilos. would increase the consumption to such an extent that the revenue from this tax would suffer no reduction, and possibly even shew an increase.

THE ITALO-ROUMANIAN PETROLEUM COMPANY.

The Italo-Roumanian Petroleum Co., which since its combination with the petroleum enterprises of the Disconto-Bleichroeder Group, has become an important factor in the Roumanian petroleum industry, recently held its annual general meeting.

The report submitted by the directors is of considerable importance, inasmuch as it supplies the first authentic statement of the amalgamation of the Bustenari and Sylva Companies and the part played in it by the Italo-Roumanian Co.

The directors remind the shareholders of the fact that last year the company acquired nearly all the shares of the Telega Oil Co., which was transformed into a Roumania Co., under the title of Sylva Co. The latter has a capital of 10,500,000 francs, of which 8,500,000 francs were issued in exchange for the shares of the Telega Co., and 2,000,000 francs were subscribed in cash by the Italo-Roumanian Co. Before, however, this arrangement was completely carried through, the company extended its agreement with the Disconto-Bleichroeder Group, which resulted in an amalgamation of the Telega Co. with the Bustenari Co., forming a new company under the title of Concordia Co., with a capital of 25,000,000 francs.

The Bustenari Co., which belongs to the Disconto-Bleichroeder Group, has a capital of 10,000,000 francs, and owns extensive concessions in the field from which it took its name. These concessions are partly intermingled with the concessions of the Telega Co., and partly extend eastward in the direction of Doftana, where recently some spouters have been obtained. The

Bustenari Co. at present possesses 106 boreholes, of which 65 are producing, and 75 hand dug wells, of which 38 are producing; 150 tanks of a total capacity of about 9,400 cubic metres, and more than 21½ kilometres of pipe lines. The production, which for the financial year 1904-5 was 76,906 tons, and for the year 1905-6, 103,872 tons, has now reached 370 tons per day. For the financial year ended the 31st March, 1906, the company distributed a dividend of 20 per cent. to the preference shareholders (whose preferential rights have now lapsed), and 8 per cent. to the ordinary shareholders.

The advantages to be derived from the Concordia amalgamation lies in the greater facility of exploitation, elimination of ownership disputes, in reduction of expenses by eliminating the double management. The formalities relating to the formation of the Concordia Co. were to be completed in June. The delay in completing these formalities were not prejudicial to anyone's interests, as the business of the two companies has been carried on for account of the Concordia Co. since the 1st of January, 1907.

The holding which the Telega Co. has in the Vega Refinery Co. is not handed over to the Concordia Co., but together with some other rights relating to a certain part of the production will remain the property of the Italo-Roumanian Co. The latter company, together with the German group, will subscribe the cash part of the capital of the Concordia Co. at 200 per cent. The Italo-Roumanian Co. will subscribe 3,240 shares of a nominal value of 1,620,000 francs. This will provide the working capital for extending operations and increasing the production which already represents an aggregate of 500 tons per day.

On their own property at Campeni, in Moldavia, the company has 44 hand wells, of which 18 are producing and 26 in sinking; also eight boreholes, of which the five new ones have made very satisfactory progress, and on the 31st of May were:—No. 4, at 347 metres; No. 5, 315 metres; No. 6, 192 metres; No. 7, 246 metres; and No. 8, 200 metres. Certain observations have been made on the company's property which tend to shew that the petroliferous zone there is more extensive than was at first supposed.

ROUMANIAN PETROLEUM EXPORTS IN MAY.

The following are the quantities of various petroleum products exported from Roumania in May, 1907:—

	Tons.
Crude, Distillate, Gas Oil, etc.	12,736
Refined Oil	16,178
Benzine	8,731
Total	37,645

This total was divided among the various consuming countries as under:—

	Tons.
England	14,891
France	12,712
Turkey	5,997
Germany	2,192
Austria-Hungary	1,356
Other Countries	497
Total	37,645

The exports to England consisted of half crude and distillate and half of refined, whilst the exports to France consisted of half refined oil and half benzine.

THE PETROLEUM FIELDS OF ALASKA.

A VALUABLE REPORT.

Mr. G. C. Martin, of the United States Geological Survey, has recently returned from Alaska, where he has been investigating the petroleum deposits in order to compile a report of guidance to prospective investors and operators in those remote fields. The report of Mr. Martin, now made public, is valuable especially on account of the secretiveness which has been observed by operators in these fields during the past two or three years, and in it the writer not only gives data concerning the deposits, but the geographical and commercial conditions which will be encountered by anyone undertaking the exploitation of districts in Alaska. Mr. Martin points out that the Controller Bay petroleum field is located on the north shore of the bay, which is a few miles east of the mouth of Copper River, in longitude 144 degrees to 144 degrees 40 minutes west, latitude 60 degrees 10 minutes to 60 degrees 15 minutes north. The localities at which there are known indications of petroleum are confined to a belt about 25 miles long from east to west, and from four to eight miles wide from north to south. This belt is adjoined on the north in part by the Bering River coal field. Its southern border is formed by Controller Bay and the Pacific Ocean, and by the alluvial flats on the east shore of Controller Bay. The eastern and western terminations are formed by Bering Glacier and by the Copper River delta respectively.

Active attempts to produce petroleum in commercial quantities in this region have been made for the last five years. The first well was begun in the summer of 1901, but no oil was produced, and no great depth was reached, as the tools were soon lost and the well abandoned. The next year the same people drilled another well and obtained some oil. Six wells were being drilled in 1903. The following year witnessed the greatest activity that the region has seen, eight wells being in progress. In 1905 and 1906 operations were restricted to two wells.

The result of these operations has been to obtain one well which yields a moderate amount of oil, another well which is capped, but in which the oil has at times a considerable pressure, and two more wells in which an unknown amount of oil stands near the top of the casing.

Drilling has proved to be very difficult and expensive, and the results are not as encouraging as had been hoped. These facts, together with the uncertainty as to the amount of territory which one concern may legally control, and the equally great uncertainty as to the conditions of the market, have led to a suspension of some of the more active operations.

The petroleum obtained in the region, both from the seepages and from the wells, is all a high-grade, light gravity, refining oil, with paraffin base and high content of naphthas and burning oils.

Position of Wells.

The wells in which oil has been obtained in this region are so few that they throw little or no light on the

problem of the occurrence of oil. A flow of oil has been obtained in one well and less quantities in three others. These four wells are close to seepages, and are on the outcrop of shales which constitute the so-called Katalla formation. They are all on lines of seepages having a north-north-east to south-south-west direction, and are all on the steeply dipping north-west flanks of anticlines and possibly on or near lines of faulting. It is unfortunate that no other wells have been drilled in similar positions on the structural lines alluded to. Such wells might not be successful, but they would test the possible theory that the above-mentioned lines have something to do with the distribution of the oil.

The net result of the drilling has been to shew the existence of moderate amounts of oil in at least part of the territory. The wells are neither numerous enough nor deep enough to determine the outline of the pools and the area of productive territory. They have demonstrated the difficulty and expense of drilling and the need of ample resources and careful management. The existence of oil in remunerative quantities has neither been proved nor disproved. The evidence from the existing wells, like that of the seepages, is sufficient to warrant further testing, if it be done intelligently and carefully, and by companies strong enough to exploit large areas on a scale which permits of wholesale economies, and also strong enough to risk their capital on what must certainly be regarded as a speculation rather than an investment.

Seepages.

The seepages all occur within a long, narrow belt extending from the edge of the Copper River delta to Bering Glacier, a distance of about 28 miles from east to west. The belt is very narrow, not exceeding four miles at the widest known point, and is parallel to the north shore of Controller Bay, which has the same east-west direction as the larger aspect of the shore of the Pacific Ocean between Copper River and Yakutat Bay. The seepages at Cape Yaktag are also reported to lie on a line having the same direction as this, and practically coinciding with it in extended position. Several of the smaller groups of seepages, such as the group on Redwood Creek and at the head of Katalla Slough, and those in the valleys of Burls and Chilkat creeks, and in the Nichawak region, have a distinct linear arrangement, each extending in a direction of about N. 15 degrees E. These lines coincide with the directions of the valleys in which they occur, and the relationship suggested is that either the position of the valley and that of the line of seepages are due to the same cause, or that the former is the case of the latter.

The oil of the seepages reaches the surface through a variety of rocks. The seepages west of Katalla are associated with metamorphic rocks, the oil coming to the surface either through the joints and bedding or cleavage planes of the slate and graywacke or through superficial deposits which probably overlie such rocks. The presence of petroleum in rocks of this character is somewhat unusual and worthy of notice.

(To be continued.)

IMPROVED PROCESS OF OBTAINING FATTY ACIDS FROM RUSSIAN PETROLEUM RESIDUES.

A patent has recently been granted to Mr. H. Breda, an engineer of Charlottenburg, for an improvement in the process of obtaining fatty acids from petroleum residues.

The invention relates to improvements in and relating to the production of fatty acid articles from naphthene acid obtained by the alkaline washing of petroleum, more especially of Russian petroleum. As known the fatty acid material has hitherto been obtained from naphthene acid in the form of a product which has a very disagreeable smell, and the object of the present invention is to obtain this product in a form convenient for the substitution of the known fatty acids, without having such disagreeable smell.

In connection with this object is the employment of the gained product for making liquid soap. As known, liquid soaps, *i.e.*, the dissolution of soap in a distinct quantity of water to maintain it liquid, have hitherto been produced by adding substances to the afore-mentioned dissolution which prevents the dissociating action of the water. It will thus be seen that hitherto in the process of producing liquid soaps only a definite maximum quantity of water could be added and to remove this defect the present invention is also intended.

The process for producing a useful fatty acid from the above-mentioned naphthene acids, according to this invention, is that the acids separated from the alkaline purifying lyes are treated with convenient oxidising means, such for instance as permanganate of potassium.

The treatment can take place under heat and under a high concentration. The naphthene acid preliminarily treated in this manner can then be distilled with the aid of water-steam or under vacuum. There is also the possibility of directly heating the treated naphthene acids without being under vacuum.

The naphthene acids purified in the afore-mentioned manner have lost their penetrating smell and can be utilised for the production of technical products of the most different kinds. The purified naphthene acids are highly suitable for obtaining liquid soaps. It may be mentioned that the product, *viz.*, the distilled naphthene acid obtained by the before-mentioned distillation process can be used for the production of cleaning, greasing and lubricating means, and furthermore, the distillation residue, which is also perfectly odourless, can be used as fatty acid material for such purposes where dark fatty acids are allowed.

In conjunction with the afore-mentioned method of obtaining naphthene acids, the author describes the process for obtaining strongly liquid soaps, which consist according to this invention perfectly of water and soap. For perfuming, disinfecting and other purposes mixtures of the afore-mentioned liquid soap with other suitable substances may be produced.

The process consists therein that the afore-mentioned naphthene acids which can be previously purified, are transformed into soaps in the manner as well known. It may be mentioned that soda soaps obtained in such manner form a clear dissolution in water.

Of course there is a maximum limit for water to be added to such soaps, at which a dissociation takes place. The soaps obtained from naphthene acids can be mixed with water up to 60 per cent. or thereabouts, the water addition depending on the molecular weight of the used naphthene acid, and the produced dissolution remaining constantly clear.

H. E. MOSS AND COMPANY'S STEAMSHIP CIRCULAR.

In reporting upon the steamship trade during the first half of this year, Messrs. H. E. Moss and Co. state that though during the early months of the year there was an all-round increase on the net profits of the working of most cargo steamers compared with last year, yet at the time of writing, except from the East, the prospects for tramp steamers have not improved, and the working expenses have increased greatly. Fortunately, the large British and Continental passenger and cargo lines, notably those engaged in the American and Pacific trades, have proved the exception, and their resources have been taxed to the utmost to cope with their ever-increasing business, as their last balance sheets shew.

The recent increase of freeboard granted by our Government has not proved "a blessing in disguise," for it has added equal to considerably over 1,000,000 tons of shipping to our registry, almost as much as a year's production, and this coming on top of a second record year in shipbuilding, has delayed the improvement which everyone hoped for. That all this tonnage has been absorbed under financial and other difficulties, and comparatively no steamers are laid up, is not only marvellous, but at the same time it is most vexatious to the majority of shipowners to find that huge profits have been made in almost every branch of commerce except theirs.

The boom in general trades is likely to continue for some time, and is bound to react on shipping. The volume of trade at home and abroad is still on the upward grade. There may be occasional set-backs here and there, but they are only temporary. The requirements of the world as populations increase and new countries are developed must be supplied.

OPERATIONS OF ROUMANIAN REFINERIES IN APRIL.

During April the Roumanian refineries treated 80,936 tons of crude oil. The quantity of various oils produced was as under:—

	Tons.
Benzine	10,566
Distillate and Refined Oil.. ..	23,827
Lubricating Oils	4,908
Residuals	39,333
Total	78,634

The stocks of various products at the refineries on 30th April were:—

	Tons.
Benzine	19,703
Distillate and Refined Oil.. ..	53,742
Lubricating Oils	22,066
Residuals	46,151
Total	141,662

Far Eastern Co.'s Production.—The production of refined oil by the Dordtsche Petroleum Co. in Java during the first five months of 1907 amounted to 793,000 cases. The Panolan Co. has during the same produced 236,690 cases of refined oil. The production of crude oil by the East Borneo Co. during the first five months of this year amounted to 38,550 tons.

The American Oil Market.

New York, Week ended June 22nd.

There has been little to distinguish operations in the oil fields during the week, advices from the more important districts being almost agreed on the disappointing character of results. Operators in the lower south-west sections have found little to encourage the search for new territory and shooting old wells has been resorted to in many of the old districts. Harrison and Cabell counties, West Virginia, furnished exceptions to the general rule in two producers, one in Sardis district, Harrison county, with 325 barrels to its credit, the first twenty-four hours after it had been drilled, and the other in Grant district, Cabell county, which was good for 200 barrels, within the same period. The latter, however, shewed a decline to 90 barrels after a few days. Both wells were inside of defined limits. A gasser with a capacity of 20,000,000 cubic feet a day was reported in the same district. From other parts of Pennsylvania territory reports of dusters and light pumpers have been general. Work in south-western Ohio has been confined chiefly to old districts. In Monroe county where some of the wells completed last year shewed an initial production of 300 to 400 barrels a day, the average of recent completions has scarcely exceeded 15 barrels. One of the best results was a well which was credited with 50 barrels. Athens county, Ohio, was reported to have furnished a gusher at a depth of about 100 feet through sand. News of a promising strike has been received from Indian Territory, in a section of the famous Glenn pool, a well shewing 125 barrels an hour, but it could not maintain this flow. Territory to the south of this pool, says the *Oil, Paint and Drug Reporter*, is attracting keener interest, indications being regarded as favorable for important developments. The resources of Indian and Oklahoma Territories are said to be almost without limit, the capacities of these fields being estimated at 150,000 to 160,000 barrels a day, with the pipe lines able to handle little more than 100,000 barrels. Efforts are being pushed to extend the shipping facilities of the fields and as soon as the output can be disposed of, it is believed that operations will be stimulated in new directions. Drilling in Santa Clara county, California, is reported to have assumed an interesting stage, and after a heavy strike of gas, which checked work for the time, the operators were sanguine that they were in the heart of one of the most encouraging streaks on the coast.

REFINED AND PRODUCTS.—The conditions governing the market for refined have shewn little change during the week, and the movement into consuming channels has been steady at well maintained values. Export requirements have been of average proportions at the higher level lately established. Charters for the week include 120,000 cases for Japan, August shipment, and 170,000 cases for Chefoo, July-August, both New York loading, and 130,000 cases for China, August shipment, from Philadelphia. Clearances for the week aggregate 8,710,010 gallons, against 12,703,990 gallons during the previous week. The Russian situation remains calm, but higher quotations are in effect for crude and the products in the Baku market. American case oil is reported lower in Calcutta, and the same product is slightly easier in Shanghai. Cable advices report unchanged markets in London, Antwerp and Bremen.

The products are moving freely for domestic account, especially for use in motor vehicles and supplies are kept at a low level. The export movement in naphtha during the week has been less active, clearances aggregating 32,360 gallons against 1,330,510 gallons during the previous week. The same quotations are current for all varieties.

For the first time in several weeks we have occasion to report an export movement in residuum, amounting to 64,400 gallons for the week.

CLOSING QUOTATIONS.

	CRUDE.	Week ended	
		June 15. 1907.	June 22. 1907.
Pennsylvania crude in bbls.		\$8.20	\$8.20
Pennsylvania crude in bulk		4.75	4.75
Residuum, bbls. for export		6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		June 15. 1906.	June 22. 1907.
Tiona		1.74	1.78
Pennsylvania		1.64	1.78
North Lima		0.98	0.94
South Lima		0.93	0.89
Indiana		0.93	0.89
CANADIAN OIL:			
Petrolia		1.37	1.34

REFINED—FOR EXPORT.

		Week ended	
		June 22.	
Barrels, cargo per gal.		S.W. W.W.	
Philadelphia		\$8.45 @10.45	
Bulk, New York		8.40 @10.40	
Bulk, Philadelphia		5.00 @7.00	
Cases, New York		4.95 @6.95	
Cases, Philadelphia		10.90 @13.90	
		10.85 @13.85	

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		June 15. 1907.	June 22. 1907.
3,000 to 10,000		10.80	10.80
1,000 to 3,000		10.85	10.85

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		June 15.	June 22.
120 fire test, S.W. .. in barrels		12	12
130 fire test, S.W.		12½	12½
150 fire test, W.W.		13½	13½
In bulk from tanks		10	10
300 fire test		13½@14	13½@14

NAPHTHA AND GASOLINE.

		Week ended	
		June 15.	June 22.
Naphtha, crude, car. lots, 68 @ 72 deg.		17.00	17.00
Gasolene, 86 deg.		24.00	24.00

PENNSYLVANIAN OIL RUNS from June 14th to June 17th were:—June 14th and 15th, 317,813; June 16th, 82,081; June 17th, 112,865. For the month of May, 3,020,463.

THE DELIVERIES OF PENNSYLVANIA OIL from June 14th to June 18th were:—June 14th, 157,938; June 15th and 16th, 259,536; June 17th, 175,648; June 18th, 161,928. For the month of May, 5,558,710.

CLEARANCES FOR THE WEEK.

During the week ended June 21st, and since Jan. 1 the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.	Year.	1906.
Refined		8,710,010	225,320,690	229,293,220
Crude		—	1,039,925	229,050
Naphtha		32,360	4,323,120	10,148,307
Residuum		64,400	371,487	—

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

		Gallons.
From New York, week ended June 21st ..		11,613,347
Total from New York, from Jan. 1st, 1907 ..		322,926,641
Same period last year		306,636,690
Increase		16,289,951
From United States, week ended June 21st ..		16,246,013
Total from United States, since Jan. 1st, 1907 ..		560,917,727
Same period last year		558,776,824
Increase		2,140,903

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The "Review" Shipping List.

JULY 5, 1907.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Lisbon	Selzaete	At Terneuse, July 2	ENERGIE	Stettin.....	New York ..	P. Dunnet Head, June 23
ALICE ISABELLE..	Philadelphia	Sables d'Olonne	L. June 28	ERIVAN	Batoum	Hamburg ..	P. Constant'ple, July 2
ALEMBIC	New York ..	Sydney(C.B.)	Arr. June 9	ETELKA	Philadelphia	Alicante	P. Del. Break June 15
AMERICAN	Antwerp....	New York ..	P. Lizard, June 25	EUPLECTELA	Batoum	Hamburg ..	Arr. June 30
APPALACHEE	Hankow	San Francisco	Arr. June 11	EXCELSIOR	Rotterdam ..	New York ..	P. Lizard, June 23
APSCHERON.....	Maddalena..	Ibrail	P. Constant'ple, June 30	EZIO	—	—	Coasting Peru
ARAL.....	Tyne	Philadelphia	P. Butt of Lewis, July 1	FRANCE MARIE ..	Marseilles ..	Philadelph'ia	P. Tarifa, June 17
ARAS.....	Philadelphia	Manchester	L. July 1	GEESTEMUNDE ..	Philadelph'ia	Flushing....	P. Dunnet Head, July 2
ARGYLL	—	—	Coasting U.S. (Pacific)	GENESSE	Philadelphia	Liverpool ..	Arr. June 29
ASHTABULA	San Francisco	Shanghai ..	At Taku, June 6	GEORGIAN	New York ..	Liverpool ..	Arr. June 23
ASTRAKHAN.....	Philadelphia	Dover	P. Lizard, July 3	GOLDMOUTH	Balekappan	Blexen	Arr. June 30
ATLAS	—	—	Coasting U.S. (Pacific)	GUTHEIL	Philadelphia	Christiana ..	P. Del. Break., June 20
AUGUSTA	Philadelphia	London	P. Lizard, July 3	HAINAUT	Hamburg ..	Alexandria..	Arr. June 28
AUGUST KORFF..	Hamburg ..	Philadelphia	P. Dunnet Head, June 20	HARRY	Swansea	Novorossisk	P. Constant'ple, June 20
AUREOLE	Sunderland	New York ..	P. Dunnet Head, July 3	HELOIS.....	Hamburg ..	Philadelphia	Arr. July 3
AZOV.....	—	—	Trading on W.C. of South Amca.	HERMIONE	Batoum	London	Arr. July 3
BAKU STANDARD	Rouen.....	Kustendje ..	P. Gibraltar, June 28-29	HOTHAM	Swansea	Batoum	L. June 29
BALAKANI.....	London	Batoum	P. Constant'ple, June 21	NEWTON	—	—	—
BATOUM	Hong Kong	Palembang..	At Singapore, May 15	HOUSATONIC	Avonmouth..	Philadelphia	Arr. June 24
BAYONNE	Philadelphia	Algiers and Savona	At Algiers, June 29	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BEACON LIGHT ..	Newport	Philadelphia	L. June 27	JOANNIS COUTZIS	Swansea ..	Batoum	At Piræus, June 27
BEME	Bombay	Rangoon....	P. Mormugao, June 4	J. B. AUG. KESSLER	Rotterdam ..	Dover	Off Ushant, July 1
BLOOMFIELD	Hamburg ..	Philadelphia	P. Prawle Pt., June 28	JAMES BRAND	Manchester	Black Sea ..	L. July 2
BORJOM	Alexandria..	Batoum	P. Constant'ple, June 20	JULES HENRI	Philadelphia	Tarragona ..	L. June 25
BRILLIANT	Copenhagen	Philadelphia	Arr. July 2	KURA	Kustendje ..	Trieste.....	P. Constant'ple, June 28
BROADMAYNE....	London	Philadelphia	P. Prawle Pt., June 23	LA CAMPINE.....	Antwerp	Philadelphia	Arr. June 28
BULLMOUTH	Hankow....	Shanghai ..	Arr. May 25	LA FLANDRE	Ghent	New York ..	Arr. July 1
BULYSES	Batoum	—	L. June 30	LA HESBAYE.....	Batoum	Antwerp	Arr. June 29
BURGERMEISTER	Stettin.....	New York ..	P. Dunnet Head, June 26	LA MADELEINE ..	Algiers	Brest	Arr. June 16
PETERSEN	—	—	—	LA VIGUESA	Philadelphia	Vigo.....	Arr. June 13
CALCUTTA.....	San Francisco	Shanghai ..	L. May 27	LACKAWANNA....	Bombay	Bengkalis ..	L. June 7
CAPTAIN A. F.	London	Sabine Pass	Arr. June 17	LANSING.....	—	—	At San Francisco, May 29
LUCAS	—	—	—	LE COQ.....	Rouen.....	Cardiff.....	Arr. July 1
CARDIUM	Cardiff	Singapore ..	Arr. June 13	LOUTSCH	Dunkirk	Novorossisk	P. Constant'ple, May 29
CATANIA	Salina Cruz	San Francisco	Arr. May 26	LUCERNA	Tyne	Philadelphia	P. Butt of Lewis' July 1
CAUCASIAN	London	Kustendje ..	P. Cape Bon, July 4	LUCILINE	Cardiff	Philadelphia	Arr. June 21
CHARLOIS	Rotterdam ..	Philadelphia	Arr. June 27	LUMEN.....	Tyne	Philadelphia	Arr. June 19
CHESAPEAKE	Singapore ..	New York ..	Arr. June 28	LUX	Cardiff	New York ..	P. Barry Island, June 27
CHESTER	Antwerp	Philadelphia	P. Scilly, June 23	MANHATTAN	Batoum	Alexandria..	P. Zea, June 27
CIRCASIAN	Buenos Ayres	Callao	P. Monte Video, June 17	MANNHEIM	Philadelphia	Rotterdam ..	L. June 25
PRINCE	—	—	—	MARGARETHA ..	Avonmouth	Batoum	P. Gibraltar, June 26
CLAM	Balekappan	—	L. June 22	MAVERICK.....	San Francisco	Seattle.....	P. Tatoosh, June 16
COL. E. L. DRAKE	New York ..	San Francisco	Arr. July 1	METEOR.....	Batoum	Vladivostock	L. June 9
COWRIE	New York ..	—	L. June 28	MEXICAN PRINCE	Liverpool ..	Cienfuegos ..	Arr. June 27
CUYAHOGA	Manchester	Philadelphia	P. O. Hd. Kinsale June 23	MIRA	New York ..	Manchester	P. Browhead, July 3
CYMBELINE	Manchester	Batoum	L. July 4	MUREX.....	Shanghai ..	—	L. July 1
CZAR NICOLAI II.	Batoum	Hamburg ..	L. Constant'ple, June 25	NARRAGANSETT..	Tyne	New York ..	P. Butt of Lewis, July 3
DAGHESTAN.....	Antwerp....	Port Arthur	P. Prawle, June 17	NERITE	—	—	Tr. in China Seas
DAKOTAH	Canton	San Francisco	Arr. June 26	NEW YORK	Southampton	New York ..	Arr. June 29
DELAWARE	Palembang..	—	P. Perim, July 2	OCEAN	Kustendje ..	Antwerp	P. Constant'ple, June 28
DEUTSCHLAND ..	New York ..	Hamburg ..	Arr. June 16	OILFIELD	Cette	Kustendje ..	L. June 28
DIAMANT	New York ..	Hamburg ..	L. June 21	ORANJE PRINCE..	Banes	Flushing....	Arr. June 24
EDWARD	Port Arthur	Antwerp	L. June 23	ORIFLAMME	Rouen	Philadelphia	Arr. June 25
DAWSON	(Texas)	—	—	OSCEOLA	Genoa	New York ..	At Lisbon, July 1
ELAX.....	Soesoe.....	—	L. July 1	OTTAWA	Philadelphia	Tampico	P. Del. Break, June 15
ELSIE MARIE	Hamburg ..	New York ..	P. Butt of Lewis, June 23	OURAL	Batoum	Thameshaven	P. Constant'ple, June 26
				PALEMBANG	Hong Kong	Borneo	L. May 16

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PAULA	Tyne	Philadelphia	Arr. June 24	SNOWFLAKE.....	Penarth	Cuba	P. Barry Island, June 5
PECTAN	Thameshaven	London	Arr. June 25	SPONDILUS	Cardiff.....	—	P. Perim, June 26
PENNOIL.....	Tyne	Philadelphia	Arr. June 29	STANDARD	Stettin.....	New York ..	In Tyne, July 1
PERLAK	Soesoe	Singapore ..	Arr. Foochow, May 11	STROMBUS	Balekpappan	Samboe	Arr. June 25
PHOEBUS	New York ..	Cuxhaven ..	Arr. July 2	SURAM.....	Penarth	New York ..	Arr. June 30
PINNA	Antwerp	San Francisco	P. St. Vincent (C.V.), June 13	SUWANEE	Philadelphia	Hull.....	L. June 20
POTOMAC	Belfast	New York ..	Arr. June 20	SVIET	Batoum	Odessa	L. June 11
PROMETHEUS...	New York ..	Hamburg ..	Arr. June 29	TELENA	Soesoe.....	—	P. Perim, July 1
PRUDENTIA	Tyne	Malta	Arr. July 1	TEREK	Kustendje ..	—	At Malta, July 2-3
QUEVILLY.....	Rouen	Philadelphia	Arr. July 2	TIFLIS	Antwerp	Philadelphia	L. June 27
RION.....	Tyne	Philadelphia	P. Butt of Lewis, June 28	TIOGA	Sunderland ..	New Orleans	P. Dungeness, June 13
ROCK LIGHT	Tyne	New York ..	Arr. June 28	TONAWANDA	Muroran....	San Francisco	Arr. June 27
ROMANY.....	Thameshaven	Rotterdam ..	Arr. June 30	TROCAS	Shanghai ..	Hankow	Arr. June 29
ROSSIJA	Hartlepool ..	Archangel ..	L. July 2	TURBO.....	Batoum	Hamburg ..	At London, June 18
ROTTERDAM	Amsterdam	New York ..	Arr. June 17	TUSCARORA	Calcutta	Boston & New York	At Boston, July 3
RUSSIAN PRINCE	New York ..	Havana	L. June 21	TWINGONE	Rangoon ..	Madras & Cocanada	At Rangoon to June 27
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	VEDRA	Alexandria ..	Aroe Bay ..	Arr. Singapore, June 27
SAN CRISTOBAL..	Port Arthur (Texas)	Liverpool ..	L. June 18	VILLE DE DIEPPE	—	—	In Port Havre, June 26
SAN IGNACIO DE LOYOLA	Philadelphia	Pasages	Arr. June 23	VOLUTE	Shanghai ..	—	L. July 1
SAXOLEINE	Havre	Philadelphia	In Tyne, June 29	WASHINGTON....	Bremerhaven	New York ..	Arr. June 30
SEMINOLE.....	Shanghai ..	San Francisco	L. Muroran, June 5	WEEHAWKEN....	New York ..	Barrow	Arr. June 30
SINGU	—	—	Tr. in East Indies	WILLKOMMEN....	Rotterdam ..	New York ..	Arr. July 3
				WINNEBAGO	Itoaaki	San Francisco	L. June 16

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

July 5th, 1907.

The price of Refined petroleum remains unchanged as follows:—Russian, 5 $\frac{7}{8}$ d.-6 $\frac{1}{4}$ d.; Roumanian, 6 $\frac{1}{4}$ d.; American, 6 $\frac{1}{2}$ d.-6 $\frac{3}{4}$ d.; Water White, 7 $\frac{5}{8}$ d.-7 $\frac{3}{4}$ d.

LUBRICATING OILS

are unaltered, prices remaining:—

American pale, £7 7s. 6d. to £11.

American dark cylinder, from £8 5s.

American filtered cylinder, from £11 2s. 6d.

Shellene, £5. No. 1 Russian, £10 7s. 6d.

TURPENTINE.

American turpentine has fallen slightly again since our last report, and is now quoted for Spot 42s, and up to the end of the year 43s.

LIVERPOOL OIL MARKET.

July 4th.

Refined oils are quiet, and sellers quote 6 $\frac{1}{8}$ d. for Russian, Galician or Roumanian; and 6 $\frac{5}{8}$ d. to 7 $\frac{5}{8}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0 $\frac{1}{2}$ d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, July 4th.

Refined, in cases, is steady at 10.65; Standard White, 8.20; Credit balances, 1.78c.

PHILADELPHIA, July 4th.

Standard White is still quoted at 8.15.

RUSSIA.

BAKU, June 29th.

The Baku oil market is very firm. Light crude oil, spot, 31 $\frac{1}{2}$ copecs per pood; residuals, in ships, 32 $\frac{1}{2}$ copecs; kerosene, in ships, 35 copecs.

BELGIUM.

ANTWERP, June 28th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, June 28th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34.25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, June 30th.

The kerosene market is firm. The price of American Standard White is 7.25 marks per 50 kilos, Russian, 7.00 marks.

ROUMANIA.

June 23rd.

Crude oil from different fields, including pipe line charges, per 100 kgs.	Franks.
Refined oil, exclusive of taxes	4.20-4.25
Motor benzine, including taxes	8.00- —
Benzine, doubly refined	23.00-24.00
Residuals in tank waggons, at refinery	25.00-26.00
Paraffin	3.60-3.70
	120.00-125.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.50- —
Benzine, sp. gr. 0.710-0.715	23.00-24.00
" sp. gr. 0.715-0.720	22.00-23.00
" sp. gr. 0.730-0.740	15.00-16.00
" sp. gr. 0.745-0.755	11.00-12.00

INDIA.

BOMBAY, June 15th.

Market strong.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg.	Rs. 6 0 2
" Chester, 125 deg.	4 8 2
" Monkey Brand, 125 deg.	4 2 2
" Bulk, 125 deg. (in local made tins)	3 11 0
" " 125 deg. (8 Imperial gallons)	3 1 0
" "White Camelia" brand, 125 deg.	No stock.

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair	3 7 0
Sumatra "Rising Sun," bulk, per unit	3 1 0
" " tins, per pair	3 11 0
Silverlight cases, per case	5 2 0
Sumatra, "Anchor" per case	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for
this Journal by . . .
the Custom House.

FOR THE WEEK ENDED 24TH JUNE, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
June.	LONDON—			
19	Page, Son and East	.. M.Lub.	2,400	Philadel.
19	A. Brown and Co. ..	.. Lub.	4,000	Hamburg
19	Union Lighterage Co.	.. M.Colza	1,030	Philadel.
19	London and India Dock Co.	Lub.	150	New York
19	"	.. M.Lub.	2,300	Hamburg
19	Mordaunt Bros. ..	.. Lub.	6,200	Philadel.
20	T. H. Lee ..	.. M.L.Gr.	780	Hamburg
20	"	.. M.Lub.	120	"
20	Page, Son and East..	..	160	Antwerp
20	Davies, Turner and Co. ..	Lub.	200	Boston
20	British Pet. Co. (Caucasian)	Gas	897,600	Kustendje
20	"	R.Lamp	789,600	"
21	Shell Transport and Trad. Co. (Pectan)	Gas	612,000	Pt. Arthur, Texas
21	"	Fuel	1,200,000	"
21	Asiatic Petroleum Co. " (Goldmouth)	Benzine	868,000	Singapore
21	"		687,350	Balikpappan
21	London & India Docks Co..	M.Lub.	2,600	Baltimore
22	A. Brown and Co. ..	.. Lub.	2,400	Philadel.
22	W. Fenn ..	.. M.Lub.	170	Christiana
22	Anglo-American Oil Co. ..	Lub.	24,000	New York
22	" (Naragänsett)	"	433,920	"
22	"	Lamp	2,580,060	"
22	Scott's Wharf ..	.. M.Lub.	12,500	"
22	Fielder, Hickman and Co..	Lub.	36,440	Philadel.
24	Anglo-American Oil Co. ..	"	5,200	"
24	A. Brown and Co. ..	"	6,400	"
24	W. B. Dick and Co. ..	"	5,375	"
24	T. H. Lee ..	.. Lub. Oil and Grease	700	Hamburg
24	London and India Docks Co.	M.Lub.	1,900	"
24	Page, Son and East..	.. Lub. Oil and Grease	400	Antwerp
24	Wilkins, Campbell and Co.	Lub. Gr.	240	"
	LIVERPOOL—			
19	Burnaby and Chantrell	.. L.Comp.	80	"
19	Pickford's ..	.. Lub. Oil and Paste	500	"
19	Huxley and Co. ..	.. Lub.	480	"
20	Worthington and Boler	.. M.Lub.	3,600	Philadel.
20	Bowring Petroleum Co. ..	"	1,130	"
20	W. B. Dick and Co. ..	"	4,270	"
20	Crew, Levick and Co. ..	"	17,385	"
20	"	"	4,270	"
20	Vacuum Oil Co. ..	"	22,770	"
21	Meade-King, Robinson & Co.	"	47,600	"
21	George B. Taylor ..	"	45,200	"
21	E. Harrison and Co. ..	"	24,000	"
21	W. B. Arkle ..	"	90	New York
22	Valvoline Oil Co. ..	"	40	"
22	W. B. Dick and Co..	"	16,500	Philadel.

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
June.				
24	Meade-King, Robinson & Co.	M.Lub.	4,800	Baltimore
24	Geo. B. Taylor ..	..	22,000	New York
24	A. Hopps and Sons ..	..	5,100	"
	BRISTOL—			
18	Western Pet. Co. (Margaretha)	Lamp	734,400	Batoum
20	Evans, Gadd and Co. ..	Lub.Gr.	80	Hamburg
21	W. Graham-Yooll and Co. ..	M.Lub.	95	Antwerp
22	Pickfords, Ltd. ..	"	290	"
22	"	.. Lub. Oil and Paste	430	Hamburg
	GRIMSBY—			
18	J. Sutcliffe and Son ..	.. Lub.	1,620	Antwerp
	HULL—			
18	Wilsons and N.E. Railway Shipping Co.	"	160	Hamburg
18	"	"	6,800	Antwerp
20	Helmsing and Son ..	"	1,000	Riga
20	T. Wilson, Sons and Co. ..	"	4,520	New York
13	Wilsons and N.E. Railway Shipping Co.	"	1,460	Hamburg
	MANCHESTER—			
18	George B. Taylor ..	.. M.Lub.	100,600	Philadel.
18	Liverpool Storage Co. ..	"	31,120	"
19	Meade-King, Robinson & Co.	"	13,200	"
19	Crew, Levick and Co. ..	"	15,360	"
19	"	.. M.Colza	7,320	"
19	J. T. Fletcher and Co. ..	M.Lub.	750	Antwerp
24	W. Hodgson and Co. ..	"	7,900	Riga
	NEWCASTLE—			
18	Tyne-Tees S.S. Co. ..	"	5,080	Antwerp
14	P. H. Matthiessen and Co.	Cylinder	170	Bergen
	NEWPORT—			
18	Mordey, Jones and Co. ..	.. M.L.Gr.	280	Antwerp
	SOUTHAMPTON—			
18	American Line ..	.. M.Lub.	250	New York
	PLYMOUTH—			
21	Anglo-American Oil Co. (Aureole)	Illum.	354,310	Philadel.
	SWANSEA—			
21	Burgess and Co. ..	.. L. Paste	230	Hamburg
	GLASGOW—			
21	Anchor Line ..	.. M.Lub.	50,880	New York
24	"	"	25,040	"
	GRANGEMOUTH—			
21	J. Currie and Co. ..	.. Lub.	400	Hamburg
21	W. Graham-Yooll and Co..	Lamp	1,800	"
	LEITH—			
20	W. Graham-Yooll and Co ..	Illum.	1,395	"

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== QUALITY TELLS. ==

To Dealers only.

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
June.				
20	Geo. Gibson and Co.	.. Lub.	400	Antwerp
22	J. Currie and Co.	.. ..	240	Hamburg
20	G. Gibson and Co.	.. ..	2,160	Antwerp
Add to Correct :—			9,773,750	
SUNDERLAND—				
17/5	British Pet. Co. (Rocklight)	Lamp	5,900	New York
LIVERPOOL—				
5/6	Meade-King, Robinson & Co. (Abbotsford)	Spirit	870	Rotterdam
Deduct to Correct :—			9,780,520	
LIVERPOOL—				
4/6	Meade-King, Robinson & Co.	M.Lub.	14,750	Batoum
3/6	Anglo-American Oil Co.	Lamp	11,690	New York
Total for Week			9,754,080	

FOR THE WEEK ENDED JULY 1ST, 1907—

June.	LONDON—			
25	Scott's Wharf	.. .. M.Lub.	9,800	Philadel.
26	Lubricating & Fuel Oils, Ltd.	.. ..	7,420	"
26	Anglo-American Oil Co.	.. ..	20,000	New York
26	H. Finkler and Co.	.. .. Crude	4,250	Bari
26	Fielder, Hickman and Co.	.. ..	56,480	Boston
27	London and India Docks Co.	Lub.	2,280	Hamburg
27	H. Funck and Co.	.. ..	10,250	Philadel.
27	Bowring Petroleum Co.	.. ..	9,920	"
27	Page, Son and East.	.. .. Lub. Gr.	40	Antwerp
29	Lub. and Fuel Oils, Ltd.	.. .. Lub.	10,000	Batoum via Marseilles
July				
1	T. W. Hughes	.. ..	5,740	Hamburg
1	London and India Dock Co.	M. Lub.	4,800	"
1	G. W. Sheldon and Co.	.. .. L.Comp.	1,200	"
1	British Pet. Co. (Turbo)	.. .. R.Lamp	1,400	New York
1			37,540	Batoum
June	LIVERPOOL—			
25	W. Gibson and Sons	.. .. Lamp	2,050	Boston
25	Butterworth, Ltd.	.. .. Lub. Gr.	170	Antwerp
25	J. Glynn and Co.	.. .. M.Lub.	1,330	Leghorn
26	Cunard Steamship Co.	.. .. M.Lub.	380	New York
26	E. H. Kellogg and Co.	.. ..	2,000	"
26	Valvoline Oil Co.	.. ..	9,225	"
26	Geo. B. Taylor	.. ..	21,000	"
26	Worthington and Boler	.. ..	809	Philadel.
27	Crew, Levick and Co.	.. ..	20,430	"
27	Meade-King, Robinson & Co.	.. ..	27,960	"
27	Stockdale and Doel	.. ..	2,500	Boston
29	Pickford's, Ltd.	.. .. Lub. Oil and Paste	340	Hamburg
29	Vacuum Oil Co.	.. .. Lub.	7,765	New York
29	"	.. ..	19,520	Boston
29	Meade-King, Robinson & Co.	M. Lub.	7,200	Baltimore
29	"	.. ..	1,200	Philadel.
29	Davies, Turner and Co.	.. ..	150	Boston
July				
1	King, Baillie and Co.	.. ..	180	"
1	Clare and Bryne	.. .. L.Comp.	270	New York
2	C. W. Field and Co.	.. .. M.Lub.	280	Antwerp
June.	BRISTOL—			
24	H. R. James and Sons	.. .. Lub.	7,400	New York
24	W. Smith and Co.	.. ..	14,720	"

DATE	PORT AND IMPORTERS	DESCRIPTION.	Nº. OF GALLS.	PORT WHENCE.
June.				
26	Heaton and Co.	.. .. Lub. Gr.	150	Antwerp
29	W. Smith and Co.	.. .. Lub.	21,240	New York
29	H. R. James and Sons	.. ..	6,400	"
GRIMSBY—				
25	J. Sutcliffe and Son	.. .. Lub.	240	Hamburg
HULL—				
25	Graham and Co.	.. .. Sol. Naph.	2,500	Reval
25	British Petroleum Co. (Rion)	R. Lamp	816,320	Kustendje
26	Wilsons and N.E. Railway Shipping Co.	Lub.	360	Antwerp
26	"	"	6,000	"
26	"	"	560	"
MANCHESTER—				
27	D. Currie and Co.	.. .. M.Lub.	2,400	Hamburg
29	British Petroleum Co. (James Brand)	Gas	377,000	Philadel.
July				
1	Pickfords	.. .. Lub. Oil and Paste	120	Hamburg
1	Geo. B. Taylor	.. .. M.Lub.	2,240	"
June	MIDDLESBRO'—			
26	J. J. Sutherland	.. .. Lub.	2,280	Antwerp
NEWCASTLE—				
25	Tyne-Tees Steamship Co.	.. .. M.Lub.	2,600	"
SUNDERLAND—				
27	Anglo-American Oil Co. (Aureole)	Lamp	1,218,280	New York
DUNDEE—				
27	D. Alexander and Sons	.. .. M.Lub.	400	Hamburg
GLASGOW—				
26	Clyde Shipping Co.	.. .. M.L. Gr.	60	Antwerp
GRANGEMOUTH—				
26	J. Currie and Co.	.. .. L. Paste	400	Hamburg
LEITH—				
25	J. Currie and Co.	.. .. Lub.	720	"
26	"	.. ..	640	Bremen
July				
1	G. Gibson and Co.	.. ..	220	Antwerp
1	W. Graham-Yooll and Co.	Lamp	2,090	Hamburg
June.	BELFAST—			
26	G. Heyn and Sons	.. .. Lub.	240	Riga
DUBLIN—				
25	Palgrave, Murphy and Co. (James Brand)	Gas	720,000	Philadel.
Total for Week			3,511,450	
Total for the Fortnight			13,265,530	

FRENCH PATENT.

Method of Refining Mineral Oils.—J. Noad and E. J. Townsend.

In the above patent, the method is to heat the oil in a still to a temperature below distillation point, and air is blown through the oil, when the more volatile portions are vapourised. The mixture of air and oil vapour is then passed through one or more separators, in which the more readily condensable fractions are condensed and collected, while the more volatile portions are led through a condenser.

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVII. (New Series.)

JULY 20TH, 1907.

No. 403.

Editorial Notes.

Lack of interest in England in the **The Coming Bucarest Congress—** coming International Congress at Bucarest is no longer an accusation to be thrown in the faces of those connected with the petroleum trade of this country. As is recorded upon another page, a most enthusiastic meeting of the English committee took place this week in London, the result of which promises to be very creditable to all concerned. It is now assured that no less than half-a-dozen papers will be presented to the Conference by the delegates from England, while, if the Government takes that personal interest in the Congress which it ought to by sending a special delegate, the number of papers promised so far may be increased. No other Government in the world has taken such a practical step in regard to the general adoption of liquid fuel upon the Admiralty vessels, and this is an additional reason why England should not be behind in sending a delegate to especially represent its Government at this important international gathering at which so many other governments will have their own representatives.

While upon the subject of the Congress, we would emphasise the value of **—and the Exhibition.** the opportunity which now presents itself to the English manufacturer for bringing his goods before the notice of the Congress delegates. It has been a happy thought on the part of the Bureau to arrange an exhibition of apparatus and all paraphernalia appertaining to the production, refining and distribution of petroleum, which will be held throughout September at Bucarest. We have already forwarded a circular from these offices to the prominent manufacturers in England upon this matter, and so it now only requires a passing word as a gentle reminder that the time for the sending in of exhibits is near at hand. The Bureau are so determined that the exhibition shall be thoroughly representative that they are making absolutely no charge for space, and what is more, they will not only take charge of the exhibits, but will pay whatever import fees are necessary upon the various exhibits. If the English manufacturers do not take full advantage of this opportunity, well, they deserve to be left behind in the race. Should any firm find that they have been overlooked by us so far, we shall welcome a line from them, when all the necessary details will be sent.

The Russian Petroleum and Liquid **A Company Divided Against Itself.** Fuel Co., Ltd., is divided against itself. The one force is formed of the preference and ordinary shareholders who, tired of the muddling of the past few years, are arrayed against the whole board of directors. The fight is bound to come, and even now

the result is certain. Things which were prophesied during the last agitation as to the disaster which was inevitable have been proved by time to be too true, and now facts have to be reckoned with. The preference and ordinary shareholders have already energetic committees at work, and it appears that the desire for a total change in the *personnel* of the board is growing very strong among all classes of shareholders. Once you touch a man's pocket there is bound to be discontent, and without a doubt the pockets of the shareholders have been touched in the present case quite substantially. Those shareholders who once bought stock at 50s. or more, and now find it at about one-tenth of that figure, have strong reason to cry out, and the time is surely coming when the directors are bound to give them consideration. The present movement is becoming decidedly interesting—more so every week.

The latest telegraphic reports from **The Latest from Baku.** Baku shew that during the past few days the price of kerosene has risen to 43 copecs per pood. Apparently, illuminating oil, which during recent years has been neglected so much and was priced lower than crude, is now coming to the front. The restricted output of crude oil, in face of the brisk demand for liquid fuel, is unable to satisfy the market, and now the shortage in the supplies of kerosene causes the inadequate supply of crude to be felt all the more keenly. It is clear that only an increased production can in time bring the present high prices down to a normal level. In the meantime, a heavy burden falls upon the consumers. Statistical figures shew that of late the consumption of liquid fuel in Russia has declined to a very marked degree, and even the Volga shipping industry, especially on the upper reaches of the river, hitherto a steadfast adherent to oil fuel, has partly gone over to wood. Sellers not only quote high prices, but decline to contract for the future, as they are themselves uncertain of their supplies. The situation has become very strained, and the necessity of finding means to increase the crude oil production is more urgent than ever.

In order to assist and regulate **To Assist West African Developments.** as far as possible the petroleum developments in West Africa, a special ordinance has been announced which should be carefully studied by prospective operators. The maximum area of lands granted to the holder of a license will not exceed 500 square miles, and the period is limited to four years. As soon as any oil has been discovered, the holder of the license requires no further legal authority to proceed with his operations, but it is stipulated that a royalty of five per cent. shall be paid to the Governor. The oil bearing lands may then be defined out of the large area upon which the license to prospect was given, and the

whole leases defined over the 500 square miles must not exceed 20 square miles. Forearmed by the experience of some of the American fields, it is now laid down that the boreholes must be over one hundred yards distant from one another. Proper methods of water shut off will be insisted upon, and the use of casing will be imperative. One remarkable condition laid down is that the use of water drilling will be prohibited altogether. The details in the latest ordinance are especially interesting in view of the various developments now taking place in the colony and protectorate of Southern Nigeria.

THE THIRD INTERNATIONAL PETROLEUM CONGRESS.

PAPERS TO BE PRESENTED.

The first list of papers to be presented by the various delegates at the coming Bucarest Congress has been issued, from which it is seen the added importance which attaches to the assembly by reason of the comprehensive nature of the papers to be placed before it. The list as so far completed is as under:—

Section I. of the Conference: Geology, Exploration and Exploitation.

Mr. Alexis Aron (France): "The French Shale Industry."

Dr. Ralph Arnold (Washington): "The Petroleum District of Santa Maria, California."

Prof. R. J. Anderson (Ireland): "Absorbent Properties of certain Woods and Rocks in Relation to Petroleum."

Albert Blazy: "Statistical Works on Petroleum Oils of Algeria."

L. Baskakoff: "Secondary Origin of Petroleum Deposits."

Bain Foster: "Map and Report on the Petroleum Fields of Illinois, U.S.A."

A. Goldberger: Communication on the Employment of Electricity in Borings, in connection with an Apparatus discovered by the Author.

Prof. Hoefer: Lecture, the title of which will be given later.

C. Horsescu: "Underground Waters."

V. Iscu: "Petroliferous Anticlinals in Planes and an Investigation of the Two Anticlinals in Planes in Roumania, with Maps and Geological Profiles."

Kremmtzer Gustav: "The Use of Wire Ropes for Petroleum Production."

Bruno Leinweber: "The B. Leinweber System of Petroleum Extraction."

M. Löwenthal: Communication on the Pollatschek Pump.

Mr. Mircea: "Geneses and Mode of Occurrence of Petroleum in the Earth's Crust, as well as the Result of Investigations and the Co-ordination of the Practical Results obtained by Borings."

G. Murgoci: (1) "The Tertiary Formations of Oltenia and their Petroleum Deposits." (2) "Petroleum in Balteni in Relation to Lignite."

M. Rakusine: "Theories of the Physico-Chemical Geology of Petroleum."

R. Sorge: "The Effect of Baling on the Flow of Oil and Water in a Borehole." (Lecture).

Mr. Tolmide: "Reports and Maps on Petroleum Fields."

V. Toraceanu: Various researches.

Dr. R. Zuber: "On the Relation between Flysch and Petroleum."

SECTION II.

E. Camerana: "On the Industry of Hydrocarbons in Italy."

Prof. W. Cronquist: Communication on the Drying with the aid of Refined Petroleum.

Dr. L. Edeleanu, in collaboration with Mr. M. Petroni, Gaul and Loebel: Contributions to the Investigation of Roumanian Petroleum.

A. Guiselin: Communication on the Foreign Petroleum Industry in France, and Considerations over the Manufacture, Composition and Analysis of the Commercial Products of Petroleum, specially demanded by the French Industry.

Curt Proessdorf: "Practical Test of the Combustion of Petroleum.—Photometric Test of Illuminating Oil."

Prof. P. A. Lidoff: "Quantitative Volumetric Determination of Hydrogen in Petroleum Oils."

Captain G. Panaitescu: Communication on the P. L. Lamp.

Prof. Zaloziecki: "On the Optical Activity of Petroleum in Relation to its Origin."

SECTION III.

Prof. W. Cronquist: "The Part Played by Sweden in the Petroleum Industry and Trade."

Prof. W. Cronquist: "Limits between Inflammable and Non-Inflammable Products of Petroleum, fixed (in legislation), by special gravity."

Dr. G. G. Danielopol: "Mining Legislation."

M. de Mouzie: "Memoire on State Monopolies Applied to the Petroleum Industry."

G. Negulescu: "The Raison d'être of the Law for Consolidation of Petroliferous Lands."

M. Rakusine: "Necessity for Creating a College for the Petroleum Industry."

Dr. Paul Schwarz: "The Participation of German Capital in the Petroleum Industry of Galicia."

Dr. Paul Schwarz: "The Participation of German Capital in the Petroleum Industry of Roumania."

Mr. Anton Raky.—It is reported that Mr. Anton Raky has relinquished the management of the Regatul Roman Co. in order to resume the superior control of the Internationale Bohrgesellschaft. It is further stated that Mr. P. Lamergul, representing the French interests in the Regatul Roman Co. will be appointed in Mr. Raky's place.

THE INTERNATIONAL BORING COMPANY.

HOW ITS OPERATIONS HAVE ASSISTED IN THE DEVELOPMENT OF THE PETROLEUM INDUSTRY.

The history of the International Boring Co.—or to give it its proper title the Internationale Bohrgesellschaft A.G.—created and personally managed by Mr. Anton Raky, whose business it took over, is so wrapped up with the development of the petroleum industry in various parts of the world, that it is almost an impossible task to separate the one from the



A GLIMPSE OF THE WORKS.

other, or to refer to the operations of the former, without also detailing the progress achieved by the industry with which our readers are so closely associated.

It is about two years ago that the Internationale Bohrgesellschaft, after having achieved considerable success in the German coal and oil fields, entered Roumania in the form of the Campina-Moreni Co., being subsequently enlarged and re-organised in the Regatul Roumain with a capital of 24,000,000 francs. Since its establishment in the Roumanian oil fields its success has been remarkable, and the rapidity with which the various petroleum areas have been developed by its operations stand only second to the success that it has achieved. It is admitted upon all hands that the rapidity of progress in this respect has been even greater than in the American oil fields, and one has but to glance along the valley of Campina to-day to see striking evidences of the energy which has been displayed by this company which has more than any other assisted the successful extension of the petroleum industry in Roumania. The Campina valley now is covered with the company's various installations, while even the river Prahova bears evidence of the hand of enterprise, for the river bed has been divided in order to assist exploitation of certain portions.

Scarcely thirty years ago, the boring for oil was generally carried out in a very primitive manner, and throughout Roumania the large number of hand-dug wells are still evidence of the fact that the various systems of boring so largely used now-a-days are of comparatively recent adoption. The tools used for the making of boreholes thirty years ago were, as we say, of a very primitive type, being made at the local smith's

shop, and very liable to break on account of the poor material of which they were made.

In 1872 the discovery was made—and quite accidentally—that when boring was carried out in the presence of water, this assisted considerably to the rapidity of the performance of the work, and as a result of experiments which were made two years later and carried out very successfully, the boring industry underwent quite a revolution, the primitive methods previously in general use being supplanted by boring tools made under the best scientific conditions, and with the skill of the practical mechanic.

Experience shewed that it was possible, with the aid of water forced under pressure into the borehole, to drill ten times more quickly than with the older methods, and consequently both the free-fall and the diamond drill systems were arranged so as to permit their being used upon this improved basis as laid down by Mr. Raky's patents.

But it was apparent to the inventor that if the system was to become a permanent success, it was necessary that the tools should be the result of the application of care and skill in their manufacture, and so it was that in 1895 he established at Erkelenz the Internationale Bohrgesellschaft, the company having a capital of 1,000,000 marks. From time to time, during subsequent years, the central establishment, like the numerous branches now spread over so large a portion of the world, was extended, until to-day we find at Erkelenz a works of a magnitude which is a striking example of the success achieved. For lighting and motive power electricity is the exclusive agent, and for the purpose of



WORKSHOPS IN THE ROUMANIAN OIL FIELDS.

operating the various machines in the different departments, the engines have a horse-power of 2,500. As shewing how rapidly it is possible at the works to despatch large orders, it may be mentioned that a short time ago an order from Africa for 260 tons of machinery and materials for boring was received, and within twenty-one days the whole of this large consignment was on its way to Africa, while a second order for 130 tons was executed and shipped within fourteen days.

Mr. Raky has long ago recognised how essential it is that rapidity, either in actual boring or in transporting plant, should be looked upon as one of the most important factors, and in regard to drilling apparatus, and all that appertains thereto, the 130 tons of machinery required for a complete installation can be taken down and removed within three days. Then in regard to



THE COMPANY'S MORENI SPOUTER.

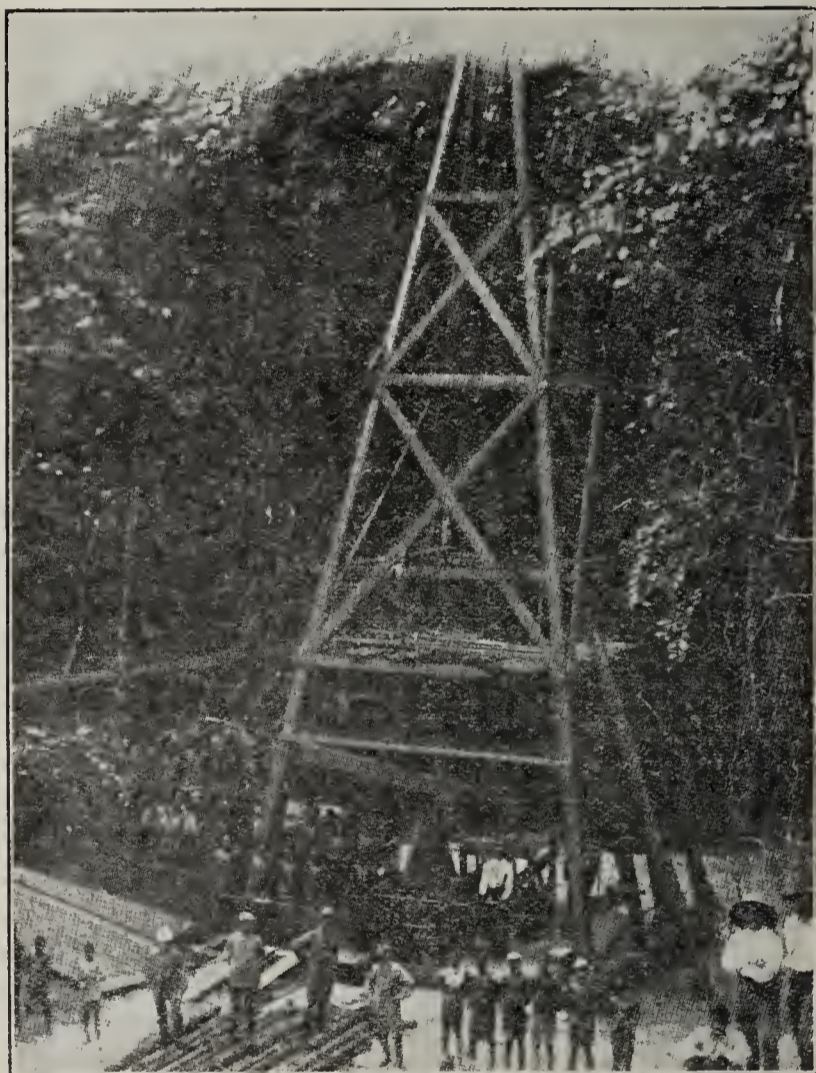
rapidity of boring, this is essential on all occasions, inasmuch as it means economy if nothing more. In Germany, rapidity is the all important factor. For instance, the German laws permit the granting of concessions to those persons who first strike the deposit, and consequently, unless the work is executed with rapidity, failure is certain.

When Mr. Raky first formed the now important company of the Internationale Bohrgesellschaft and its origin was in a humble workshop with the necessary power supplied from a two horse-power engine, the policy was that drilling should only be undertaken on behalf of other people, but soon it was recognised that it would be far more advantageous if the company bored on its own account. This policy has been since adopted in many parts of the world, and with most remarkable results, for by this means the company has in many countries opened up very valuable properties whose mineral wealth had previously been quite unknown.

As we have already pointed out, the company's operation in regard to the petroleum industry were first in Germany, and thanks to its energies the Weitzel field has been raised from its lethargic condition into a most progressive locality for petroleum production, and wells have been bored which now yield an average quite up to the production of the Roumanian wells. In Roumania too, the company has created quite a revolution, and a great part of the progress which is to-day noticed throughout the Roumanian oil fields, is

directly traceable to the efforts of the Internationale Bohrgesellschaft.

Its associated companies are spread in many lands, and its energies are now almost a household word not only in Europe, but far distant continents. In 1895 it drilled less than 10,000 feet; 10 years ago it drilled 68,000 feet; in 1902 the figure rose to 184,000 feet, while for last year the drilling records of the company shew that no less than 600,000 feet were drilled. What this means to the company itself can be seen from the fact that upon the company's capital of 1,000,000 marks, a profit was realised of over 14,500,000 marks, which allowed for the declaration of a 500 per cent. dividend, and then the placing of large sums to depreciation (nearly four times the amount of the capital) and



AN AFRICAN EXPEDITION.

in other directions. It can truly be said that the Internationale Bohrgesellschaft has a record which has no equal in the annals of the history of the petroleum industry.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 18th July, 1907, as follows:—

Prices are firm. The leading makers are well booked for some months ahead, and the minimum selling prices have been fixed as under:—

1C	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	15/7 $\frac{1}{2}$ per box.
1C	19 $\frac{1}{4}$ × 14	120 "	110 "	15/7 $\frac{1}{2}$ "
1C	20 × 10	225 "	156 "	21/9 "

F.o.b. Wales. Tin lining and iron hooping extra.

THE RUSSIAN PETROLEUM AND LIQUID FUEL COMPANY, LTD.

PREFERENCE SHAREHOLDERS APPOINT A COMMITTEE.

Renewed Agitation Against the Board.

Last Saturday week a meeting of the preference shareholders of the Russian Petroleum and Liquid Fuel Co. was held at the Cannon Street Hotel, E.C., for the purpose of considering the best course to be adopted for the protection of their interests, the meeting having been called by Mr. C. F. Dixon MacConkey.

Mr. Holzapfel was voted to the chair, and, in opening the meeting, said it was gratifying to find that they had received such strong support from a large number of shareholders, who had also expressed themselves as willing to contribute toward any expenses that might be incurred in carrying on the agitation. That meeting had been called as the result of correspondence which had passed between Mr. Ikin and the board, and which shewed that the preference shareholders' reserve fund of over £130,000, which they all thought, and had been told, was an additional security for them, was not theirs, but had been charged to the debenture holders as well as being available for the general creditors. He suggested that a small committee should that afternoon be formed to enquire into the matter and to take legal advice if they thought fit, and so see whether the board were not individually liable to the shareholders. He then suggested the gentlemen who should form the committee.

Dr. Dvorkovitz asked the Chairman if he would kindly substitute his name on the proposed committee for that of a shareholder having a substantial holding in the company. He felt that it would be far better if all the gentlemen upon the committee had large holdings. He would, however, be pleased to give the committee all the assistance he could.

Mr. Burke, as representing the ordinary shareholders' committee, said there was no doubt that the position of the company was very deplorable, and something ought to be done without delay to enquire as to the cause of their being in that sad plight. He was a large ordinary shareholder, and he reminded the company that at one time those ordinary shares stood at 60s. The company had paid dividends of 155 per cent. during the time Mr. Tweedy was manager, but from the date of his leaving the company dividends had dropped until now they had gone beyond the vanishing point. When allegations were made against the directors, they might be denied or otherwise, but one thing they could not get over, it was that up to a certain point and under certain management they had a most profitable business, but after that period, when the change came about, things began to go bad, and had gone worse ever since. He personally paid over £3,000 for shares that were to-day worth about £300. The directors were their trustees, and now things had gone wrong, he thought they ought to be willing and ready to court any investigation. After they had thoroughly investigated, then they could go back to the shareholders and say what they found. It might be they would have to say they were mistaken, but if on the other hand they found that it was due to the management and the actions of the directors that the company had almost ruined itself, then they could say they must insist upon having a change.

Mr. Whittaker enquired how many shares were held by the present board, and the reply was that they held only 11,000.

Continuing, Mr. Burke said the committee had a right also to enquire why it was that Mr. Gladstone left the board of directors, seeing that the committee which was supposed to investigate the matter reported that he had acted in a straightforward and fair manner.

A number of other speeches were delivered, and the committee as suggested by the chairman was agreed to unanimously, it being understood that this committee should also work in conjunction with that representing the ordinary shareholders.

THE MANTACHEFF PETROLEUM COMPANY.

The Mantacheff Petroleum Co., one of the leading petroleum producing, refining and exporting firms at Baku, has held its annual general meeting at Tiflis recently.

The accounts submitted by the directors for the eighth financial year, 1906, shew that the revenue obtained during the year was as under:—

Debit —				Roubles.
B. sale of petroleum products ..	..	..	..	9,693,370'00
Other items of revenue ..	..	..	..	202,639'69
Oils used for own needs ..	..	..	..	1,166,403'73
Stocks of oils on 1st January, 1907 ..	..	..	..	4,467,092'01
Total ..	..	..	..	15,529,505'43
Credit —				
Stock of oils on 1st January, 1906 ..	..	..	..	2,470,553'60
Oils bought ..	..	..	..	1,852,868'43
Cost of working oil fields, storage installations, steamers, transport of oils, rents, royalties, taxes and management ..	..	..	..	8,574,134'61
Written off:				
Book value of property destroyed by fire, etc., losses through strikes, bad debts, depreciation of Government stock and other unforeseen items ..	..	..	..	918,789'31
Profit for 1906 ..	..	..	..	13,816,345'95
Total ..	..	..	..	1,713,159'48
Total ..	..	..	..	15,529,505'43

BALANCE SHEET ON 1ST JANUARY, 1907 (O.S.)

Assets —				Roubles.
Cash in hand ..	..	..	..	159,667'33
„ at bankers ..	..	..	..	108,980'05
Shares and stocks held by the company ..	..	..	..	1,732,102'36
Property:				Roubles.
Oil fields ..	..	..	..	21,133,582'78
Refineries and storage installations ..	..	..	..	5,805,647'68
Steamers and tank waggons ..	..	..	..	1,032,563'84
Unfinished buildings and installations ..	..	..	..	27,971,794'30
Materials and goods ..	..	..	..	203,329'78
Bills and promissory notes ..	..	..	..	1,890,996'01
Sundry debtors ..	..	..	..	783,122'33
Expense for 1907 account ..	..	..	..	3,140,625'49
Transitory sums ..	..	..	..	49,500'06
Deposits made:				Roubles.
In cash ..	..	..	..	23,099'20
Bills ..	..	..	..	450,000'00
Stocks, etc. ..	..	..	..	2,542,900'00
Deposits, returnable ..	..	..	..	3,015,999'20
Share deposits ..	..	..	..	530,800'00
Balance of loss for 1905 ..	..	..	..	180,000'00
				202,048'29
				44,750,580'38
Liabilities—				
Nominal capital (88,000 shares of 250 Rs. each)	..	..	..	22,000,000'00
Amortisation fund ..	..	..	..	5,747,875'02
Insurance fund ..	..	..	..	366,937'07
Bills ..	..	..	..	1,492,100'00
Excise duty on kerosene ..	..	..	..	1,497,500'00
Sundry creditors ..	..	..	..	8,324,680'16
Bills discounted ..	..	..	..	346,665'12
Transitory sums ..	..	..	..	6,467'53
Deposits made by the company in stocks, etc.	..	..	..	2,542,900'00
Deposits held by the company ..	..	..	..	530,800'00
Creditors on share deposits ..	..	..	..	180,000'00
Unclaimed dividend ..	..	..	..	1,496'00
Profit for 1906 ..	..	..	..	1,713,159'48
				44,750,580'38

The profit the directors proposed to apply in the following manner:—202,048 roubles for writing off the balance of the loss incurred in 1905; 85,700 roubles for statutory reserve; 500,000 roubles for amortisation fund; 41,707'56 roubles Government tax; 880,000 roubles to be distributed as a dividend of 10 roubles per share; and 3,703'63 roubles to be carried forward.

The accounts, as well as the directors' proposal as to distribution of profits, were approved by the meeting unanimously.

THE ASSAM OIL COMPANY, LIMITED.

ANNUAL MEETING.

The ninth annual meeting of the shareholders of the Assam Oil Co. took place at Winchester House, E.C., on Wednesday, Lord Ribblesdale, the chairman of the company, presiding.

The directors' report, which was taken as read, stated that the improvement in the main field mentioned in the last report had been continued, and they considered the position in both maintenance and development to be satisfactory, and to shew good promise for the future. Some of the experimental wells had reached the oil, thus greatly improving the company's position.

A great deal of work had been done at the refinery during the year, enabling the products to be treated by better methods, and the whole process to be carried out in a more economical manner. The boiler stills had been found to be a little behind the other plant, and a small addition to them had been made, with the result that the capacity of the whole refinery had been appreciably increased.

The board stated last year that they looked forward with confidence to the result of 1906. That confidence had, they thought, been justified by the profit of £24,652 8s. 5d., which the accounts shewed. At the same time, though the profit was a good one, they did not under present circumstances feel justified in paying a dividend. They recommended that out of the above profit £17,500 be written off to depreciation account, leaving a balance of £7,152 8s. 5d. to be added to the £6,710 1s. 1d. brought forward from last year, and making the amount carried forward £13,862 9s. 6d.

The directors had elected Mr. H. S. Ashton, of the Burmah Oil Co., Ltd., to a seat on the board, and his appointment fell for confirmation at that meeting. Mr. T. B. Bowring was at the same time elected by the Burmah Oil Co. to a seat on their board.

The Chairman, in moving the adoption of the report, stated that since the last meeting the directors had asked Mr. H. S. Ashton, a gentleman of wide and Indian experience to take a seat on the board. Last year he mentioned that he thought they would probably require to spend on capital account some £30,000, so he was glad to say they had kept well within the mark. Of the amount expended on capital account, £15,242 had been spent at the drillery, and the balance, apart

from a small amount spent on the waterworks, had been expended on the refinery. Proceeding to speak of the company's production, the Chairman said that the improvement in the main field, as mentioned last year, had been continued, and the directors considered the position to be thoroughly satisfactory. Although their wells were not producing large quantities of oil, he wished to emphasise the point that they were stayers, while, at the same time, the company had added enormously by their operations since their last meeting to their oil-bearing territory. They had thus proved their property to be extremely valuable. All those things were plain matters of proved fact. In regard to the two wells put down on the east of the property, he might mention that oil was struck in one of them a month ago, and that discovery was one of the most significant things that had occurred in the history of the company. They were now going deeper in order to prove the ground, and in the hope that they would get an increased flow of oil.

In conclusion, the Chairman said that if the accounts were examined, it would be seen that the board had spent a great deal more money than they had received from the shareholders. They had, however, now proved the value of their property, and more money would be required, without which that expansion which capital could alone create could not be carried on. When the time came for the issue of this additional capital, the shareholders would have timely notice so that they might, if they desired, participate in the issue. He then moved the adoption of the report and accounts, this being seconded by Sir A. C. C. de Renzy.

The company's general manager (Mr. A. D. Hawkins) then addressed the meeting, speaking more particularly of the progress which had been made in the method of treating the company's crude oil. In 1903 they had made a loss of 30 per cent. in treating it; in 1904-5 that loss was reduced to 10 per cent., but for last year it only amounted to 4.75 per cent.

Sir Boverton Redwood pointed out that it was clear that the Assam Co. had now reached a stage in its continuous progress when the future profits were simply dependent upon the amount of capital available for further work.

A Shareholder enquired why the details of the production was not published periodically, to which the Chairman replied that that was considered inadvisable.

After other questions had been put and answered, the resolution was put and carried, and a vote of thanks to the company's manager closed the meeting.

THE OPERATIONS OF THE BAKU REFINERIES.

STATISTICS FOR JANUARY, 1907 (in poods).

I.—MANUFACTURE OF ILLUMINATING OILS.

Distillation.

			Submitted to Distillation.			Products Received.			
			Crude.	Other Products.	Total.	Kerosene.	Residuals.	Other Products.	Loss.
January	..	..	20,861,527	215,000	21,076,527	5,597,164	14,052,408	943,735	483,220
									Fuel used.
									678,717

Refining.

			Submitted to Refining.			Refined Product Obtained.				Chemicals used.	
			Kerosene	Other Distillates.	Total.	Kerosene	Other Products.	Total.	Loss in Refining.	Acid.	Soda.
January	..	..	5,342,186	11,520	5,353,706	5,212,389	9,562	5,221,951	131,755	26,120	9,937

II.—MANUFACTURE OF LUBRICATING OILS.

Distillates Received.

			Machine Oil.	Spindle Oil.	Cylinder Oil.	Goudron.	Solar Distillates.	Residuals.	Other Distillates.	Loss in Distilling.	Fuel used.
January	..	..	731,949	118,691	38,899	981,234	1,037,428	372,339	91,353	83,635	436,807

Refined Products Received.

			Spindle Oil.	Machine Oil.	Cylinder Oil.	Loss in Refining.	Chemicals used.		
							Acid.		Soda.
January	..	..	117,205	589,138	18,960	82,079	17,283	..	2,514

The output of benzine distillates amounted to 41,438 poods. The output of refined benzine was 10,524 poods.

THE LAUNCH OF THE "IROQUOIS."

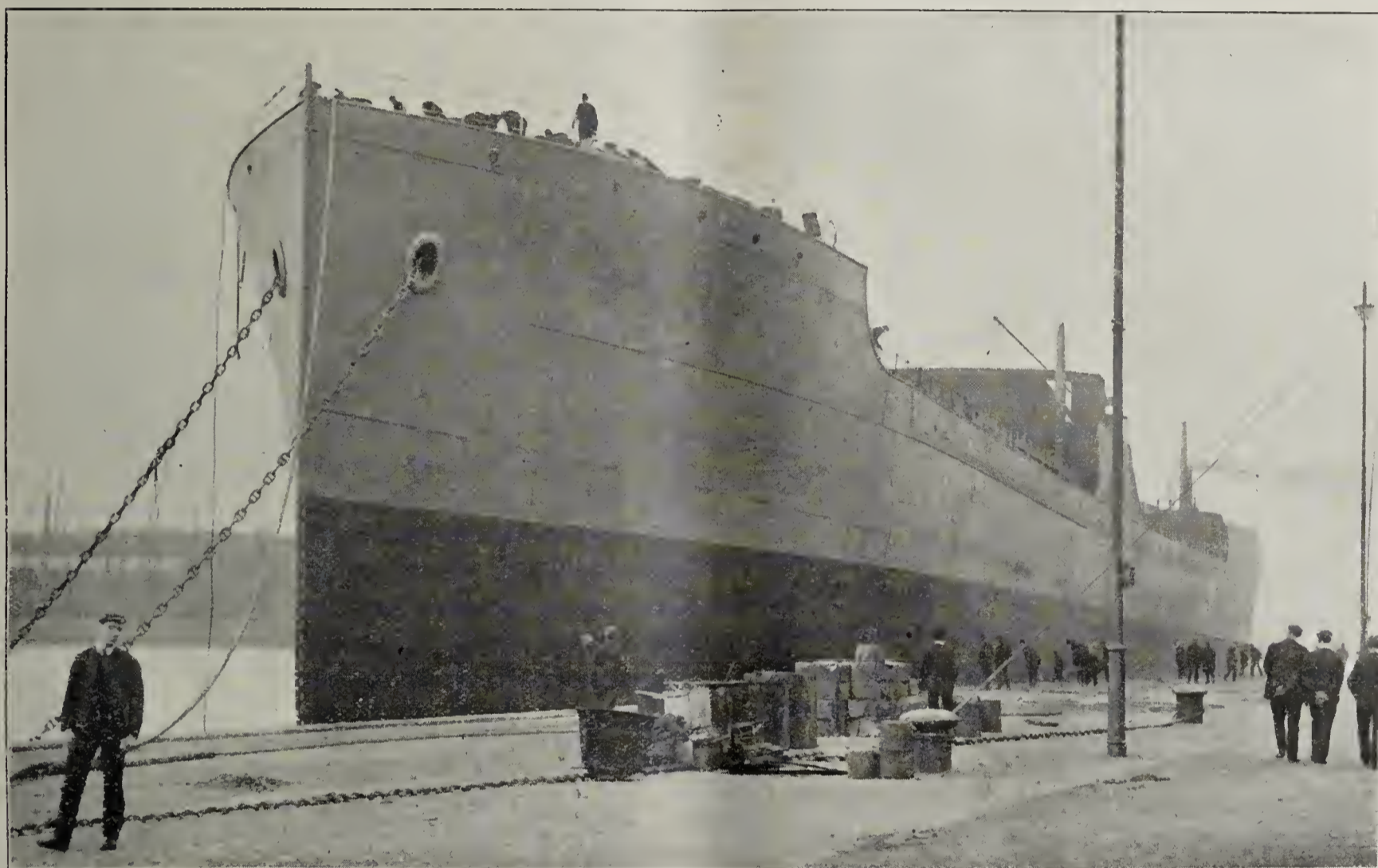
The Anglo-American Co.'s New Tanker.

The oil tank steamer "Iroquois," launched a few days ago for account of the Anglo-American Oil Co., Ltd., from the Queen's Island yards of Messrs. Harland and Wolff, Ltd., of Belfast, is unique as an oil-carrying boat in that she is the first twin-screw oil steamer to be placed in the Atlantic service, and combines with her own large oil-carrying capacity, the facilities for towing a barge of almost equal size in the trans-Atlantic traffic. The principal dimensions of the steamer are as follows:—Length, between perpendiculars, 476 feet; beam, 60 feet; and depth moulded, 35 feet 5½ inches. The machinery consists of two sets of quadruple expansion

to take her into port. It is the intention, however, that she will be used entirely in tow. The "Navahoe" will have her own boiler power for working the cables used in connection with the towing, also for the oil pumps used in unloading, besides electric light plant, etc.

Both vessels will be equipped with wireless telegraphy, and in case of the barge breaking adrift at sea she will thus be able to communicate her position to her consort or passing vessels.

The combined cargoes of the "Iroquois" and her consort will amount to nearly 20,000 tons of oil in bulk, which is by far the largest quantity ever shipped in one



THE "IROQUOIS" ALONGSIDE AFTER THE LAUNCH.

engines having cylinders 21 inches by 30 inches by 60 inches, with 42-inch stroke. She will be fitted with four single ended steel boilers 16 feet 1 inch in diameter, and 11 feet long, with a working pressure of 215 lbs. per square inch with Howden's forced draft. Her furnaces are arranged to burn either coal or oil.

In fitting the "Iroquois" for towing all the latest improvements have been adopted, and when she leaves Belfast for sea she will be accompanied by her consort—the steel barge "Navahoe"—also built for account of the Anglo-American Oil Co. by Messrs. Harland and Wolff, and now ready to be launched.

The barge "Navahoe" is 450 feet in length, with a capacity for oil in bulk of about 9,400 tons. She will have six masts, and will be rigged as a fore and aft schooner, so that in case of emergency such as breaking adrift at sea, she will have the necessary sails and gear

consignment. The largest single oil tanker afloat is the s.s. "Narragansett," belonging to the same company, and which has a carrying capacity of about 11,200 tons of oil in bulk.

It is hoped that the "Iroquois" and barge will be ready to leave Belfast in October for the U.S.A., where they will load oil in bulk for England. The transportation of large cargoes by means of an oil-carrying vessel and barge in tow is only in use in the Atlantic trade by the Anglo-American Oil Co., and marks a distinct departure from the ordinary methods.

As the "Iroquois" left the ways, she was gracefully christened by Mrs. Powell, wife of Mr. F. E. Powell, one of the directors of the company, who was also present at the launch, together with Mr. Archibald Maclean, manager of the Anglo-American Oil Company's shipping department; Mr. Ross, the Company's

Belfast representative; and a large number of Belfast guests. Among those invited were:—Mr. Samuel Lawther (of Messrs. S. Lawther and Harvey), Mr. John Clark (of Messrs. John Clark Co.), Mr. J. B. Ferguson (of Messrs. J. B. Ferguson's, Ltd.), Sir W. J. Baxter (of Coleraine), Mr. Stanley P. Cory (of Belfast), Mr. Dominick Dolan (of Dublin), Mr. H. Kirkwood (of Lisburn), Mr. J. Gillespie (of Lisburn), Mr. John Watson (of Londonderry), Mr. W. Connor (of Newry), Mr. Wm. McMullen, and others.

ROUMANIAN PETROLEUM PRODUCTION DURING MAY.

The following are the provisional figures of the production of crude oils at the Roumanian oil fields in May, compared to the complete figures for April:—

	May. Tons.	April. Tons.
Prahova District—		
Bustenari	37,899	39,258
Campina-Poiana	20,187	21,420
Moreni	29,781	25,039
Baicoi-Tinta	5,357	5,342
Other Fields in Prahova	595	2,340
Total for Prahova	93,819	93,399
Dambovitza District	2,824	2,666
Buzeu	—	762
Bacau	—	585
Total	96,643	97,412

When the full returns are available the production in May will probably be found to have been equal to April, if not larger.

The production of the principal firms was as under:—

	May. Tons.	April. Tons.
Steaua Romana	27,246	31,783
Regatul Roman Co.	21,287	19,720
Bustenari Co.	12,102	11,260
Romano-American Co.	10,204	6,737
Sylva Co.	4,537	4,147
Trajan Co.	4,315	4,100
International Co.	3,600	3,474
Colombia Co.	2,361	2,180
C. M. Pleyte and Co. (late Moreni Co.)	1,992	1,499
Aquila Franco-Romana	1,305	1,382
Seceleanu Bros.	—	1,262
H. F. Drader	744	1,397
Naphta Co.	693	736
K. Ozinga	300	844

ROUMANIAN PETROLEUM EXPORTS.

The following are the figures of the exports of petroleum products from Roumania in May.

Destination.	Crude, Gas oil, distillate, etc. Tons.	Illumi- nating oil. Tons.	Benzine. Tons.	Total. Tons.
England	7,163	7,728	—	14,891
France	249	6,182	6,281	12,712
Turkey	3,713	2,261	23	5,997
Germany	83	—	2,529	2,612
Austria-Hungary	2,493	—	52	2,545
Bulgaria	208	7	33	248
Italy	9	—	229	238
Servia	7	—	2	9
Total	13,925	16,178	9,149	39,252

Captain Lucas, the discoverer of Spindle Top, will in all probability be present at the Bucarest Petroleum Congress.

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING JUNE.

THE SHIPMENTS INTO VARIOUS PORTS.

In the following table we give the various shipments of petroleum products into the ports of the United Kingdom during the month of June. The total quantities imported amounted to 25,744,905 gallons, or about 3,000,000 gallons less than the total figures for May, which, in their turn, were the largest of any one month during the year. The imports of illuminating oil account

for one-half of the total imports during June, being considerably ahead of those of the preceding month. The total shipments for the respective months of this year have been as under:—

	Gallons.		Gallons.
January	28,000,000	April	24,900,690
February	22,200,000	May	28,699,880
March	17,002,320	June	25,744,905

	Lubricating.	Illuminating.	Residuals.	Benzine.	Other Products	Fuel.	Gas.
Barrow	—	—	—	—	—	683,820	—
Belfast	340	—	—	—	—	—	—
Bristol	157,305	1,611,080	—	—	4,400	—	427,480
Dublin	—	—	—	—	—	—	720,000
Dundee	400	—	—	—	—	—	—
Glasgow	241,435	—	—	20,000	12,750	—	—
Grangemouth	19,520	2,600	—	—	—	—	—
Grimsby	5,060	—	—	—	—	—	—
Hull	30,190	816,320	—	2,500	2,640	—	—
Leith	49,560	4,315	—	—	—	—	—
Limerick	—	1,602,410	—	—	—	—	—
Liverpool	865,255	778,630	—	21,870	9,850	—	—
London	857,155	4,965,920	—	1,570,850	20,280	2,125,830	1,509,600
Manchester	862,190	3,174,390	—	—	15,530	—	958,750
Middlesboro'	4,240	—	—	—	—	—	—
Newcastle	11,930	—	—	—	—	—	—
Newport	280	—	—	—	—	—	—
Plymouth	—	354,310	—	—	—	—	—
Southampton	250	—	—	—	—	—	—
Sunderland	—	1,218,280	—	—	—	—	—
Swansea	5,030	—	—	—	—	—	—
West Hartlepool	360	—	—	—	—	—	—
Totals	3,110,500	14,528,255	—	1,615,220	65,450	2,809,650	3,615,830

THE PROBLEM OF MOTOR FUEL.

AN IMPORTANT EXPLANATORY LETTER.

So many so-called experts have of late been rushing their ideas into print regarding the problem of motor fuel that incalculable damage has already been done to that particular branch of the petroleum industry which caters for the motor trade. It was with a view to counteract the impressions that have gained favour as a result of the many misleading statements made that Dr. Dvorkovitz contributed the following letter to the engineering supplement of the *Times* of Monday last, which is self-explanatory:—

“Sir,—In the *Financial and Commercial Supplement* of the *Times* of June 24th you published an article upon the interesting subject of the problem of motor fuel, an article which I perused last week while visiting the Roumanian oil fields. You will doubtless be aware of the great interest which I have taken for a number of years in this question, and, from my long association with the petroleum industry, you will recognise that that interest has been more than theoretical.

“At the outset let me say that I regret that many writers upon the subject of motor fuels do not appear to be thoroughly conversant with the actual facts, and the natural consequence is that conclusions are arrived at which cannot by any means be substantiated. In this respect I fear that your correspondent has got out of his depths in not a few instances.

“The first entirely wrong impression which he conveys is the statement at the commencement of his article that most petrol comes from America. As a matter of fact, only a small portion of American spirit is exported, for the reason that the vast bulk is required at home. To-day, of the total import of motor spirit into the United Kingdom, only 16 per cent. comes from America, over three-fourths of our petrol coming from Dutch India. America, therefore, occupies a very secondary position in regard to exporting petrol to this country, but what has been that country's loss is Roumania's gain, for from Roumania we are now receiving 10 per cent. of our motor spirit. In the course of his contribution your correspondent arrives at certain conclusions as to other fuels which can, he imagines, be brought into general use, and upon which I will touch in a moment, and concludes by stating that if these new fuels can be utilised they would be an enormous potential set-off against the monopoly of foreign petrol.

“It is to be regretted that he did not enlighten your readers what constitutes this monopoly, as he implies, of foreign petrol. With all my experience and close association with all the leading producers of light spirit in the various petroleum-producing countries, I must admit I know of not the slightest monopoly. On the other hand, I can say without fear of contradiction that there is to-day considerable competition in regard to the supply of motor fuel, and, so far as monopolists are concerned, even if they did exist, they play no part in ‘cornering’ the supply of petrol, or of being instrumental in forcing up the price. When an article of general use increases in its price it is unfortunately the rule to put this down to the working of some mysterious monopoly, but in this case I would ask, Where is the monopoly? As is generally known, petrol upon the English market has been artificially low for some years, and even now its present price yields nothing but a fair return for the cost of refining and transportation expenses. One thing

that always should be kept well in mind in dealing with this complicated question is that an increased price is bound to follow an increased demand, for, after all, petrol is only a product of distillation, and in any refinery it would prove a most disastrous business to distil petroleum simply for the purpose of supplying motor spirit. Again, we must also remember that the sources of supply in the case of light oils are very limited, and yearly becoming more so, and hence it comes about that it is increasingly difficult to obtain low gravity spirit.

“Your correspondent, I notice, makes reference to my evidence given some months ago before the Fuels Committee of the Motor Union, where I made it clear that if only motorists would look upon the quality of petrol in a more rational light, and learn to recognise that the chief point is not the specific gravity of a petroleum spirit, but its range of boiling points, then this fear of an ultimate shortage of petrol would be immediately wiped away with one stroke, and a heavier gravity spirit, yet equally suitable for a motor fuel, would come on the market in ever-increasing quantities, and at reduced prices. Here we have the crux of the whole matter. To-day numerous producing fields are cut off from assisting to supply the demand for motor spirit because the oils they produce are not capable of yielding a spirit with a low gravity, and if only my suggestion would be carried out—and I am pleased to think that everything points to this being the case in the near future—then all classes of motorists may remain quite contented as to the supply of petrol in the future.

“To look to Scotland for a largely increased production of motor spirit is simply to blind one's eyes to facts. The Scotch shale oil coming from the retorts is capable of yielding about 7 per cent. of a spirit with a gravity of about .745 (a heavy spirit), and naturally the yield of this product could not be increased except at enormous cost, unless there was a proportionate increase in the demand for lubricating, illuminating, and other products of oil distillation.

“Then your correspondent pays attention to benzol, and endeavours to answer the question as to how far this product of coal-tar distillation is capable of replacing the petroleum spirit as we know it to-day in the form of petrol. Let us look at facts. It is, of course, very difficult to obtain actual figures, but more than one authority has approximately placed the total amount of coal annually carbonised in this country for gas-making purposes at 15,000,000 tons. The resulting coal tar may be estimated on the basis of ten gallons to the ton, while the *maximum* of 2 per cent. benzol from coal-tar shews that the present production of benzol cannot be more than approximately 3,000,000 gallons per annum. It would, indeed, be very interesting to know how your correspondent arrives at the figures of two or three times this amount, and especially interesting would it be to learn how by some strange calculation he is convinced that a production of 30,000,000 gallons of benzol could rapidly be brought about. Possibly on some future occasion he will enlighten those who have studied this subject carefully upon this point.

“In the meantime I would urge my contention upon all motorists to view this problem of motor fuel from its scientific and practical aspect, and by the encouragement of the use of the heavier grades of benzine [petrol] for motor purposes to entirely prevent the remotest possibility of their ever being a famine in this most useful commodity.

“Yours faithfully,

“P. DVORKOVITZ.”

45, St. Mary Axe, E.C.

COMING DISSOLUTION OF THE PETROLEUM COMPANY OF GALICIA.

We are informed that the Creditanstalt of Vienna has given notice to terminate next September the agreement which it had with the Petrolea Co., which represents the majority of the petroleum producers in Galicia, and in consequence of this the Petrolea Co. will be dissolved.

The position of the Petrolea Co. has for some time been very precarious owing to the fact that the crude oil production of the outsiders and the firms who are both producers and refiners has reached about 50 per cent. of the total output. Several meetings of producers have been held in Drohobycz, having as their object to devise a means of getting the outsiders to join the Petrolea Co.

At a meeting held on June 10th it was proved that the Petrolea Co. represents barely 50 per cent. of the Galician crude oil production, and that under such circumstances it can exist no longer.

The Creditanstalt of Vienna, which finances the Petrolea Co., gave formal notice to the latter that, if by the end of June it could secure the adhesion of at least 95 per cent. of the total production, it will grant a further advance of 11,000,000 kronen on the crude oil for the purpose of erecting storage tanks, otherwise it would terminate the agreement on the 1st of September next.

In view of the gravity of the situation there was another meeting at Drohobycz, at which 50 producers participated, including outsiders. Count Zamoyski officially communicated the firm decision of the Creditanstalt to withdraw from the agreement unless the Petrolea Co. gained control of 95 per cent. of the production before the end of June. Count Zamoyski referred to the increased production of crude oil in Galicia, which from 76,180 tons in April rose to 89,190 tons in May. Of the latter quantity 30,090 tons were obtained by firms

owning refineries, and 14,950 tons by outsiders, and the remaining 44,950 tons, or only about 50 per cent., by the Petrolea Co. There was only one way of saving the situation, and that was to get the outsiders to join the Petrolea. A committee, consisting of Count Zamoyski, Mr. Wolski and Mr. Rapoport, was appointed to work in this direction. On the 26th of June the producers were again called together at Drohobycz, and informed that there was hope of coming to a satisfactory arrangement.

The negotiations which took place on the 27th, 28th, and 29th of June having failed to achieve the desired result, the Creditanstalt announced that it will terminate the agreement on the 1st September. The situation in Galicia is most critical, and the greatest pessimism prevails in petroleum circles.

HURRICANE IN THE ROUMANIAN OIL FIELD.

A hurricane of extraordinary violence passed over the Campina-Bustenari oil region on the 4th inst. The storm was most violent at the town of Campina, where a number of houses were unroofed and trees uprooted. In the valley of the Prahova river, where the boreholes of the Steaua Romana and other firms are situated, a large number of derricks were destroyed. No full accounts of the damage done are as yet available owing to the interruption of telegraphic communication. It is feared that there may have been some loss of life and injuries to persons. Twenty workmen slightly wounded have been admitted to the Campina Hospital. The hurricane was accompanied by continuous thunder and lightning, and it is fortunate that there was no outbreak of fire at Campina.

The hurricane was also felt at Bustenari and Telega, but the damage there was less extensive than at Campina. At Bustenari two boreholes were struck by lightning and set alight.

DETAILS OF BAKU PRODUCTION AND BORING DURING APRIL, 1907.

The following are the details of the production of crude oil at the Baku oil fields during April as published in the latest issue of the *Neftiannoie Dielo* :—

						PRODUCTION (in poods).				Average per Well per Day.				
						By Baling.	By Spouters.	Casual.	Total.					
						Number of Wells in Exploitation.								
Balakhany	678	6,192,228	—	4,800	6,197,028	322			
Saboontchi	614	14,523,168	957,299	368,478	15,848,945	909			
Ramany	198	7,177,344	—	21,443	7,198,787	1,316			
Bebe-Aibat	198	9,630,282	348,825	13,000	9,992,107	1,805			
Total in April 1907						1,687	37,523,022	1,306,124	407,721	39,236,867	831
Total in March, 1907						1,635	39,853,722	660,496	417,212	40,931,430	842
Total in April, 1906						1,410	39,705,461	1,382,000	415,143	41,502,604	1,028

In addition to the above, there were produced at Binagadi from 12 boreholes 23,801 poods.

The production by spouting was obtained from the following wells :—

Name of Firm.				No. of Plot.		No. of Well.		Production.	
								Poods.	
At Saboontchi	..	..	Baku Russian Petroleum Co., Ltd.	..	..	173	..	28	200,000
"	..	..	Nobel Bros.	..	..	172	..	372	126,259
"	..	..	"	..	..	172	..	376	25,000
"	..	..	"	..	..	18/c	..	339	23,500
"	..	..	Rossia Co...	..	..	159	..	4	5,540
"	..	..	Neft Co.	..	..	25c/153c	..	59	577,000
" Bebe-Aibat	..	..	Zoubaloff	..	..	XX	..	24	55,280
"	..	..	Nobel Bros.	..	..	27	..	11	224,945
"	..	..	Schibaieff Co.	..	..	29	..	7	68,600

THE SPIES PETROLEUM COMPANY. LTD.

ANNUAL MEETING OF SHAREHOLDERS.

The annual meeting of the shareholders of the Spies Petroleum Company, Ltd., was held yesterday (Friday) at the London Chamber of Commerce, Cannon Street, E.C., Mr J. Annan Bryce, M.P., taking the chair.

The report of the directors was taken as read, it being as under :

The net production of crude oil for the year, after deducting leakage and water, amounted to 6,057,077 poods.

	Poods.	Poods.
The stock on hand at the 1st/14th January, 1906, was		145,470
Which, with the net production during the year of		6,057,077
And crude oil purchased		7,000
Made a total of		6,209,547
Of which there were :—		
Sold and delivered	4,926,854	
Used for fuel	1,168,607	
		6,095,461
Leaving in stock on 31st December, 1906/13th January, 1907		114,086

The decrease of 780,691 poods in the net production, as compared with the preceding year, is entirely attributable to the effects of the strike which lasted for 31 days in the months of June and July last.

The crude oil sold and delivered as above realised 1,038,465.44 roubles, an average selling price of 21.077 copecs per pood.

The total cost of drilling and deepening of wells upon the old plots during the year under review has been written off against revenue.

The cost of maintaining buildings, machinery and plant in good condition has also been charged to revenue.

The cost of the wells upon the new plots acquired during the past year by the company, amounting to £8,134 10s. 3d., has been charged to capital.

All other charges in connection with the administration and working of the new plots have been charged to revenue.

	£	s.	d.
The net profit for the twelve months ending 13th January, 1907, was	31,734	12	5
To which must be added the balance brought forward from last year	6,347	4	1

Making a total balance to the credit of Profit and Loss Account as at the 1st/14th January, 1907, of 38,081 16 6

Of this sum your directors have placed to :—

	£	s.	d.
General depreciation of leases, buildings, plant and machinery the sum of	19,000	0	0
And to reserve against fire and employers' liability insurance the sum of	2,000	0	0
	21,000	0	0
Leaving a balance of	£17,081	16	6

Out of which Russian taxes have to be provided.

The results of the company's operations during the past year would have been much better, and the development of the new lands acquired during the period would have advanced more rapidly had it not been for the serious strike which occurred on the oil fields during the months of June and July last.

The strike caused not only a loss of production during its continuance, but also a serious interference with the baling and drilling work for some considerable time after its termination.

Moreover, before the strike could be settled, the company in common with other producers in Grosny had to grant a number of concessions to the workmen which have increased the cost of working to a very considerable extent.

Your directors regret to say that the conditions of labour at Grosny are still in an unsatisfactory condition, and there is a disposition on the part of the workmen to go out on strike upon the smallest pretext.

During the year 1906, your directors arranged for the acquisition of 90 dessatines of oil land in various parts of the Grosny oil fields, and since the close of the year the transfer of the titles to the company has been completed.

The company now possesses the following plots of land in the Grosny oil fields :—

	Dessatines.
Plot No. 15 (Dobrynin)	10
„ „ 16 (Neklepaieff)	10
„ „ 163 (Samkovo)	10
„ „ 19 (Mistouloff)	10
„ „ 40 (Baskakoff)	10
„ „ 24 (Golubinsky)	10
Plots Nos. 32, 32a and 32b (Stupin)	30
„ „ 13, 14, 27, 28 and 43 (Kusmin)	50
Total	140 =

about 378 acres.

Owing to the strike, drilling operations could not be commenced upon the new plots until the end of September.

A satisfactory production has already been obtained from some of the wells drilled and as the depth increases, it is expected that the results will be still better.

The total sum due as purchase-money for the lands bought during 1906, together with buildings and erections thereon, amounts to £63,255 10s. 9d., of which £32,139 13s. 7d. has been paid to date. The remainder of the purchase money is due by instalments spread over one year and eight months.

The sum of £21,781 15s. was spent during the past year on the equipment and development of the new properties, and during the current year further considerable sums have been expended under the same head.

The total amount expended to date on the acquisition, equipment and development of the properties purchased during 1906 exceeds £60,000.

In view of the unsettled aspect of affairs at Grosny, and of the commitments in connection with the new properties, your directors consider that it is in the best interests of the company that a dividend should not be declared at the moment, and propose to carry forward the balance mentioned above.

Prices during the past year were maintained at a high level, and there is every probability that good prices will rule for some time to come.

As mentioned in the circular to shareholders of 24th January, 1907, 60,000 shares, a portion of the unissued capital, have been allotted at par.

The best thanks of the shareholders are again due to Messrs. Maresch, Pressler and Culbertson, and the staff of Grosny, for their devotion, at considerable personal risk, to the interests of the company during the trying conditions which prevailed at Grosny during the year.

Mr. Nelidoff vacated his seat on the board on the 19th of March last.

Messrs. W. Gleboff and C. J. Palmer retire from the board by rotation, and, being eligible, offer themselves for re-election.

The CHAIRMAN, in moving the adoption of the directors' report and statement of accounts, said that as the shareholders would note, the board had followed the policy of past years, and they had written off the cost of drilling and deepening of the wells out of revenue. That sum amounted to over £24,000, but with regard to the cost of drilling on new lands recently acquired, that had been treated as a capital charge. During 1906, not only had their production somewhat decreased, but the expenses had been greater. The increased expenses were accounted for, partly by the labour troubles, and by the fact that the company had to pay increased baling charges owing to their production being on the decrease. With regard to the present position and prospects of the company, the production of the old lands continued to diminish, and so, unless the company could reach a deeper strata by developing new territory, then they had to look to a continuously decreasing production. He was pleased to say that some of the new lands promised very well, and were now giving considerable production, and it was upon this new territory that developments were being pushed forward very rapidly. The shareholders would be pleased to know that a new system of drilling had been introduced and that was giving perfect satisfaction. The speaker then proceeded to speak of the disquieting features in Grosny—the labour troubles and the political situation—and concluded by remarking that so far as the market values of oil were concerned, the outlook was distinctly promising. He moved the adoption of the report.

Mr. W. R. von Oppenheim seconded the adoption of the report, and in doing so spoke of the wisdom of putting the company in a thoroughly sound position with regard to the future, rather than declaring a dividend for the year under review.

The report was then agreed to, and the re-election of the retiring directors and a vote of thanks to the company's officials concluded the meeting.

NOTES FROM ALL QUARTERS.

RUSSIA.

The Bebe-Aibat Auctions.—The question of the confirmation of the results of the auctions on Government petroliferous lands at Bebe-Aibat held on November 1st, 1906 (o.s.), came before the Russian Senate on the 8th of June. Of the senators present 26 voted for the confirmation of the auctions and 20 against it. The question will now be decided by a departmental conference to be called at the Ministry of Justice.

The Shikhovo Petroleum Co., owning a petroleum producing property in the Shikhovo part of the Bebe-Aibat oil field, has during its fifth financial year 1906 had a revenue of 1,551,270 roubles, and expended 910,705 roubles. In 1905 the revenue was 661,278 roubles, and expenditure 467,116 roubles. The nominal capital is 3,000,000 roubles; the property and plant are valued at 4,377,329 roubles. After making liberal allowances for depreciation and reserve fund, a dividend of 5 per cent. has been declared.

Criticised Concessions.—A plot of 2,700 acres of land in the Uchta oil region has been conceded by the Russian Government to Mr. Voronoff. The Government have set down the limit of depth to which a well has to be drilled before being abandoned as fruitless at about 600 feet, but Mr. Voronoff proposes to drill to 1,400 feet. In competent circles this policy of granting huge tracts of land to one individual is severely criticised, for instead of assisting it will prevent the proper development of the oil field.

The Maili-Sai Lease.—We have some time ago referred to the proposed leasing out of a plot of Government petroliferous lands at Maili-Sai in Ferghana of an area of 108 acres. Only two applications were receiving consideration, from General von Transe and Prince Khilkoff respectively. General von Transe having failed to pay down the caution money at the prescribed time, the authorities now propose to Prince Khilkoff to pay down a deposit of 62,000 roubles, of which 50,000 is to guarantee the construction of the pipe line forming part of conditions of the concessions, and 12,000 roubles representing one-tenth of the obligatory annual royalty payments.

AMERICA.

The Crowley Company's Dividend.—The Crowley Oil and Mineral Co. of Louisiana has recently declared its eighteenth dividend of 10 per cent.

More Oil Tanks for Casey.—The Casey tank farm of the Standard Oil Co. is about to be extended, the company purposing to build 60 additional tanks.

In Union County.—This entirely undeveloped area in the fields of Kentucky is to receive the drill very shortly, several thousands of acres having been secured by Pennsylvanian operators. The indications for oil are reported to be very good.

Another Test at Mound Prairie.—The Mound Prairie Oil and Gas Co. has let a contract for the boring of another well on its holding on Mound Prairie, Texas. It is believed that in the first test the stratum was passed through at about 1,000 feet.

A Standard Line to the Gulf.—The Standard Oil Co. is, so it is stated, about to commence the laying of a pipe line to the Gulf of Mexico. Mr. J. P. Miller, acting on behalf of their interests, states that the preliminaries have been settled, and that the construction of the line will be commenced before the end of the summer.

A New Prolific Field.—A new field has recently been discovered at Morris, this being a continuation of the oil sands found in Indian Territory, and situated about thirty miles south of the Glenn field. One of the latest completions in the field, where drilling was started two years ago, is the Brown well, which is flowing at the rate of over 1,000 barrels per day.

New York Exports.—For the first half of this year New York exported her largest quantities of oils to Flushing, where nearly 50,000,000 gallons were shipped. This figure was about 9,000,000 gallons behind that of a year ago. London and Antwerp come next, these ports having taken about 15,000,000 gallons each. In the case of Antwerp this figure is an increase against that of a year ago, but in the case of London the figure is a decided decrease.

Work on Manitoulin Island.—Development work upon Grand Manitoulin Island, at the head of Georgian Bay, is proceeding rapidly, and the wells which have already been shot have proved to be better than was anticipated. The drilling is very cheap, inasmuch as the oil is found in a shallow sand formation.

Gulf Coast Production Declines.—The Gulf Coast production is gradually declining, Saratoga, Spindle Top, Humble, Batson and Sour Lake, all, according to the latest issue of the *Oil Investors' Journal*, shewing a falling off in the production up to the middle of June as compared with that for the corresponding period of the preceding month.

How's This for Depth?—Arrangements have been made for the drilling of a well near Santa Ynez, California, which is to go 6,000 feet deep, if oil is not encountered in commercial quantities before that depth. This deep test is already down several hundred feet, 18-inch casing being used. So far the deepest well ever drilled in California is 4,000 feet deep.

In the Glenn Field.—In order to bring about an increase in production a number of compressed air pumps have been installed upon properties in the Glenn field. Many of the older producers are perceptibly declining, but the new completions more than make up for the decrease. Activity is noticeable on all hands, and the field is being extended in certain directions, notably toward Sapulpa.

More Tests in Illinois.—It is reported that representatives of Pittsburg capitalists are endeavouring to secure leases upon large tracts of land in Alexander county, Ill., where they are to bore for oil. It is asserted that a careful study of the geological conditions shews that the lands secured are in direct line with the oil belt which extends from Indiana through Illinois, Missouri, and into the Indian territory.

ROUMANIA.

Drilling at Bucshani.—Messrs. Pleyte and Co. have commenced drilling at Bucshani in the Dambovitza district on a concession obtained from Mr. Dallio. The drilling will be done by the water-flush system.

Messrs. Seceleanu Bros. have struck oil in abundant quantity in two of their boreholes at Bustenari. Other boreholes on the same plot are nearing the oil stratum. Encouraged by the success of these two boreholes, this firm has started four new wells.

Developments at Baicoi.—At Baicoi results are not coming up to expectations. Since the well of the Trajan Co. struck oil the output of well No. 6 of the Steaua Romana declined to 10 tons daily. The Regatul Roman Co. has lately completed another well at Baicoi, which yields between 10 and 30 tons of crude oil per day.

Highly Satisfactory.—Mr. G. Stefanescu, managing director and chief proprietor of the firm of G. Stefanescu and Co., of Campina, has published a balance-sheet for 1905 shewing a net profit of 233,040 francs on a nominal capital of 750,000 francs. Mr. Stefanescu proposes to apply the whole of this profit towards amortisation of wells and plant, which now stand in the books at 1,171,844 francs.

The Alpha Co.—Borehole No. 2 of the Alpha Co. at Tzinta has struck oil. The yield varies, reaching at times 100 tons per 24 hours. This company has purchased for 500,000 francs the property of F. Drader and Co. at Tzinta, comprising three boreholes, of which one has a good production. Thanks to the good results recently achieved at Tzinta great boring activity now prevails in this locality.

An Active Boring Programme.—The Regatul Roman Co. intend starting a large number of new boreholes during the present year. The International Boring Co., of Erkelenz, Germany, who has undertaken on its own account to drill all the wells for the Regatul Roman Co., has already commenced bringing into Roumania the men and material required for this purpose. In consequence of this arrangement the whole technical management of the company will pass into the hands of the International Boring Co.

best qualified to judge of the right or wrong of laws laid down primarily to assist in the development of trade.

By reason of the geographical position of the great Russian oil fields, this question of the freights to the port of shipment gains an importance, which can find no parallel throughout the oil industry of the world. The subject, too, is by no means a new one, for almost since the industry began to assume a degree of importance, producers and exporters alike have frequently been alarmed at the fact that the attitude of the Government was rather to work the Transcaucasian railway with the very maximum of profit and consequently cripple progress, rather than put forth an honest attempt to meet the demands of the petroleum export trade, and fix a rate which would be a fair and an equitable one.

The recent decision will come to our readers all the more surprising when it is recollected that at the conference held last year, the Government officials present viewed the suggestion with considerable favour, and from the promises they gave, it was looked upon as only a question of a short time before the tariff between Baku and Batoum would be reduced, and the export trade permanently profit thereby. Since that time, the agitation for a reduction has in no way lost its strength, and as an additional inducement to urge the Government to bring about a modification, many of the refiners have taken a personal interest in the question upon which they have had considerable correspondence with the Government.

But the Russian Government was ever blind to the policy which would have as its basis the placing of the petroleum industry upon a perfectly sound basis—a basis upon which it could grow and acquire strength—a blindness which is manifest to all who have paid the slightest attention to the many questions which have from time to time arisen and with which it has had to deal. The Russian petroleum export trade is at present in as bad a condition as it well can be, for at every turn the voice of the Government has been totally opposed to the granting of anything which aimed at the betterment of the industry.

It is a trite saying that no branch of commerce or industry can possibly stand still. It must either progress or retrogress, and we fear that the retrogression in the Russian oil export trade in the future will be even more serious than it has been hitherto. It is all very well that the railway should be worked with rates that permit of making large profits, but in the present case, it must not be forgotten that in the long run it will be the Russian Government which will be the great loser. A falling off of the export trade must on necessity stay the hand of energy at the oil fields themselves, since the Russian petroleum industry cannot live without an export, and, inasmuch as the Government received in royalties something over 50 per cent. on the average of the total value of the oil production, it is clear that whatever re-action follows in the natural order of events, the Government will suffer considerably.

Now that the through pipe line is in working order, the bulk of the refined oil for export passes through it, and this most economical method of transport—urged many years ago—must of necessity be of benefit to the Government who are the owners.

The chief aim of those who agitated for the con-

struction of the through pipe line was not only to increase the export facilities, but to bring about a reduction of the freights, and now that so many tank waggons have been set at liberty, it would have only been reasonable for the Government to utilise all the forces it has in order to encourage the export trade as much as possible. In this respect Roumania is a striking example, where cheap freights, together with an intelligible Government interest in the industry, has brought into being an export trade in petroleum which soon bids to overtake that of Russia.

As in other petroleum producing countries, the Russian Government is expected to foster an industry which to them yields such good returns, and it should long ago have learned the lesson that one of the great factors for the future success of a petroleum export trade is that of cheap and stable rates.

Russia is year by year losing its export trade; and all the arguments and plausible stories of the labour troubles at home or open competition abroad will not get rid of this fact. Its trade with the Far East is practically a dead letter—as dead as the proverbial door-nail—its trade with Germany is now one of past importance, while with regard to our own country, Russia is in a very poor position indeed.

But all this may not point to lack of progress consequent upon a blind policy of the Government, yet it does certainly shew how essential it is that the Russian Government should arouse itself, and by mustering all its forces, see if something cannot be done to remove those many hindrances to progress, of which a high and unreasonable railway rate is one of the most important.

LONDON OIL SHARE MARKET.

FRIDAY, JULY 19TH, 1907.

The Oil Share section of the London Stock Exchange has continued in a state of suspended animation throughout the period since we last wrote, until the last day or so, when a few buyers have advanced the price of both Russian and Schibaieff Ordinary, and Shell Transport Preference.

The end June account is of nineteen days duration, and this fact, taken into consideration with the close proximity of the August holiday, is not conducive to activity, but it is believed the autumn will witness a general improvement; numerous signs indicating awakening interest on the part of the public.

On Monday following our last issue Shell Transport Ordinary were very strong, quotations having improved 2s. per share on balance at the close of the market at 43s. to 44s., but that is the only alteration to record during the week.

On the following Monday Bibi-Eybats rose $\frac{1}{16}$ to $\frac{1}{8}$, and on Wednesday Assam Oil gained a similar amount at $9\frac{11}{16}$. Russian Ordinary and Schibaieff Ordinary also both advanced 1s. at 5s. 6d. to 6s. 6d. and 4s. 6d. to 5s. 6d. respectively.

With Thursday's business Shell Transport Preference were the turn better at $9\frac{13}{16}$ - $10\frac{3}{16}$, while to-day's latest quotations will be found on page 40.

At the mid-July settlement, which commenced on the 10th, interest charged for the continuation of Oil Shares ranged from about 4 per cent. to 6 per cent. to 5 per cent. to 7 per cent., while the comparison with "making-up" prices disclosing no important change.

Californian Oilfields at 6 have improved $\frac{1}{16}$, while Baku Ordinary have risen 6d. at 3s. 6d.

Schibaieff Preference have fallen $\frac{1}{8}$ at $1\frac{5}{8}$. Shell Transports are also $\frac{1}{8}$ lower at $2\frac{3}{16}$, while Spies at 7s. have fallen 6d., and Russian Ordinary 1s. at 4s. Anglo-Russian at $\frac{1}{8}$, Baku Preference at 5s. 3d., Russian Preference at 6s., and Schibaieff Ordinary at $\frac{1}{4}$ being all without alteration.

Cardiff as a Centre for Petroleum Distribution.

The visit of His Majesty and Queen Alexandra to Cardiff, last Saturday, to open the recently completed new dock, which now bears the name of her Majesty, recalls to one's mind the truly wonderful progress which that port has made during the past few decades.

In the early forties Cardiff was possessed of but one dock—now known as the West Bute Dock—which was constructed at the cost of about £400,000. Its trade was very limited yet growing. With the opening of this dock the trade of the port commenced to enormously develop, and to such an extent that in 1855 the East Bute Dock was constructed. The vast increase of trade consequent upon the above-mentioned undertakings may be gauged by the fact that while in the year 1839 the export of coal from Cardiff was only 4,000 tons, the year 1854 saw the figures leap to considerably over 1,000,000 tons.

After various minor steps, including the construction of a tidal harbour, the next great advance in the progress of the docks was the construction of the Roath Basin, opened for traffic in 1874. In the same year was projected yet another immense dock; powers were obtained for its construction, and thirteen years later the Roath Dock was opened having an area of 33 acres, and the basin an additional 12 acres, as compared with 19½ acres for the West Bute Dock and 49 acres for the East Bute Dock.

From the port of Cardiff, coal is, of course, the principal export, but in addition there are patent fuels,

iron rails, produce and other commodities, while the imports include iron ore, timber, stone, petroleum and its allied products, etc. It is in regard to the latter that we would especially touch upon here. There was a time—and not very long ago—when oil tankers regularly journeying to Cardiff to discharge their bulk cargoes were absolutely unknown. The oil consumed in that populous part of South Wales, of which Cardiff forms the centre, was imported to other receiving depôts in the first place, and from there Cardiff received its supply.

But the march of events has changed all this, and to-day it is quite a usual thing to see a large oil tank vessel discharging her cargo into the immense storage tanks at Penarth—a suburb of Cardiff. True, the importers experience great difficulties owing to the shallow nature of the channel at this point at various stages of the tide, but a little



judgment has very successfully overcome this.

About five years ago, the Homelight Oil Co. (then the Caucasian Petroleum Export Co.) decided to establish an installation at Ely Harbour, Cardiff, and our illustration give a very good idea of the storage accommodation here erected. The tanks have a capacity of between four and five thousand tons, and these are constantly fed by a regular service of oil tanks journeying to and from Batoum. This company is the only large distributing oil company having its installations at Cardiff, Avonmouth being the central depôt for the Anglo-American and other companies, from which they cater for their clients throughout South Wales.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO JULY 15th, 1907.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since July 1.	From Jan. 1.	Since July 1.	From Jan. 1.	Since July 1.	From Jan. 1.	Since July 1.	From Jan. 1.	Since July 1.	From Jan. 1.	Since July 1.	From Jan. 1.	Since July 1.	From Jan. 1.	Since July 1.	From Jan. 1.
Austria ...	—	—	—	67,440	—	167,770	—	—	—	—	—	—	—	—	—	135,210
Belgium ...	—	153,410	36,310	342,625	—	—	—	310	—	4,000	—	—	—	590	36,310	500,935
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India ...	—	—	—	—	—	—	—	—	—	11,399,260	—	—	—	—	—	11,399,260
Germany ...	4,670	1,164,395	105,180	844,030	—	2,000	—	—	—	80	—	—	400	3,500	110,250	2,014,065
Holland ...	—	1,020	240	9,950	—	—	—	—	—	341,400	—	—	9,300	85,230	9,540	437,600
Roumania ...	—	5,744,090	—	—	—	—	—	3,730,390	—	1,459,000	—	238,700	—	—	—	11,172,180
Russia ...	4,830,930	22,535,800	10,600	2,902,120	—	—	—	—	—	9,50	—	—	804,900	804,450	5,645,620	26,252,120
U.S.A. ...	3,545,470	51,667,910	1,506,850	13,903,805	131,020	579,710	849,770	26,775,320	1,050,140	3,470,560	—	4,112,470	25,010	874,170	7,108,260	107,383,975
Other Countries	—	950	855	29,575	—	—	—	—	—	2,500	—	40	100	5,190	955	38,255
	8,381,070	81,267,605	1,610,035	24,099,605	131,020	649,480	849,770	30,506,020	1,050,140	16,686,550	—	4,351,210	838,900	1,773,130	12,910,935	159,333,600

THE COMING INTERNATIONAL CONGRESS AT BUCAREST.

ENTHUSIASTIC MEETING OF THE ENGLISH COMMITTEE.

A meeting of the English committee of the members of the third International Petroleum Congress, which is to be held during September at Bucarest, Roumania, took place on Wednesday at the offices of Dr. Dvorkovitz, London, E.C.

Sir Fortescue Flannery, Bart., was elected chairman of the committee, while Mr. A. Beeby Thompson was chosen as hon. secretary of the committee.

Dr. Dvorkovitz explained that, as hon. secretary of the Permanent Committee of International Congresses, he had sent out a number of circulars to gentlemen interested in the petroleum industry in England, and the replies he had received were, on the whole, quite satisfactory. When he was recently in Roumania, it was suggested to him that everything should be done which aimed at extending the circle of English interest in the coming Congress, and consequently he had promised that everything possible would be done so far as he was concerned.

Sir Fortescue Flannery expressed his willingness to prepare a paper for submission to the Congress dealing with developments in the construction of oil tankers.

Mr. Thompson remarked that, inasmuch as Sir Fortescue was acknowledged as a great authority upon the construction of oil tankers, the paper was bound to be of exceptional interest to all associated with the petroleum industry. The speaker added that either his partner—Mr. Hunter—or himself would be visiting the Congress, and so he would undertake to prepare a paper entitled "Notes on the Effect of Geological Structure on the Distribution of Petroleum."

Prof. David Louis informed the meeting that his arrangements would allow his visiting Bucarest for the Congress, and at a later date he would make known the title of the paper which he intended to submit.

Mr. Gaster regretted that so far the English Government had not appointed an official delegate to represent it at the Congress, and urged that the committee should take steps to approach the Government in regard to this matter. From the conversation which he had had with Sir Boverton Redwood, he was of the opinion that if the importance of the Congress were emphasised to the Government, they would see that a special representative was sent. So far as he was concerned, he would attend the Congress and also give a paper upon "The Economy and Safety of Oil as an Illuminant."

After other discussion, it was agreed that the hon. secretary should write the Foreign Office urging them to appoint a delegate to attend the conference, and it was also decided that Sir Boverton Redwood should be written to and asked that, although his time would not allow his visiting Roumania during the Congress, he should prepare a paper to be submitted thereat.

Mr. Thompson pointed out that as the Admiralty were now very largely interested in liquid fuel, they ought also to send a special delegate.

Dr. Dvorkovitz remarked that at the first congress the French Admiralty was specially represented, and he thought it was very important that the English Admiralty should have a delegate at the Bucarest Congress. He mentioned that he would be pleased to present two papers to the Congress—one on the "Distillation, Cracking and Gasification of Petroleum Hydrocarbons" and the other on the "Evolution of the English Oil Trade."

The matter of communicating with the Admiralty was left in the hands of Sir Fortescue Flannery and Mr. Thompson.

It was decided that in view of interest which Mr. Holden (Great Eastern Railway) had taken in the use of oil fuel upon the English railways, he should be asked to communicate a paper to the Congress upon this interesting subject.

This was all the business of public interest, and the meeting adjourned until the replies had been received from the various bodies it had been decided to write to.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM CO., LTD.—The production for the week ended July 6th, was 224,000 poods, or 3,611 tons; and for the week ended July 13th was 233,000 poods, or 3,756 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL CO., LTD.—The production for the week ended July 7th was 184,000 poods, or 2,966 tons; and for the week ended July 14th was 181,000 poods, or 2,918 tons.

SPIES PETROLEUM CO., LTD.—The output for the week ended 14th July was 154,555 poods, or 2,492 tons; and for the week ended 7th July, 126,590 poods, or 2,041 tons. (Thirty-eight hours stoppage due to strike on oil fields.)

THE EUROPEAN PETROLEUM CO., LTD.—The production for the week ended July 7th was 133,082 poods, or 2,145 tons; and for the week ended 14th July was 133,735 poods, or 2,156 tons.

Prof. David Louis has just returned from Egypt, where he has been in the interests of the recently registered English Company about to operate in Egypt.

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THE PETROLEUM FIELDS OF SANTA BARBARA.

ANOTHER GOVERNMENT SURVEY.

The United States Geological Survey is fully alive to the importance which now attaches to the various petroleum regions of California. During the past few months it has issued several elaborate reports dealing with the more southern oil districts of California, and now a most interesting and highly comprehensive report has been prepared by Messrs. Eldridge and Arnold upon the Santa Barbara county deposits which are contained in what is known as the Santa Maria oil district. The authors point that the Santa Maria oil district, comprising the Santa Maria, Lompoc and Arroyo Grande fields, occupies the central and northern portions of the Lompoc and Guadalupe quadrangles in northern Santa Barbara county and the southern part of the San Luis quadrangle in southern San Luis Obispo county, Cal.

The formations involved in the geology of the district include the Franciscan (Jurassic) sandstone, shale, glaucophane schist, jasper and intruded serpentine; Knoxville (lower Cretaceous) conglomerate sandstone and shale; pre-Monterey (which may include both Cretaceous and older tertiary) conglomerate, sandstone and shale; Sespe (Eocene or Oligocene) sandstone; Vaqueros (lower Miocene) conglomerate, sandstone, shale and limestone; Monterey (middle Miocene) diatomaceous and clay shale, limestone and volcanic ash; Fernando (Miocene-Pliocene-Pleistocene) conglomerate, sandstone and shale; and Quaternary, gravel, sand, clay and alluvium.

Two structural systems prevail in the district, that of the north-eastern portion trending north-west and south-east, and that of the southern portion trending east and west; while in the intervening region are features trending in a direction intermediate between the two. Few faults of importance were noted in the field. The productive territory lies in a region of more or less gentle folds in the central part of the area, most of the wells being located along or near anticlines.

The wells vary in depth from 1,500 to over 4,000 feet. In the Santa Maria and Lompoc fields they obtain their oil from zones of fractured shale or sandy layers in the lower portion of the Monterey (middle Miocene) shale. The production of the individual wells varies from 5 to 3,000 barrels per day, being on an average between 300 and 400 barrels. The gravity of the oil ranges from 19° to 35° B., the yield from the greater part of the field

being about 25 degrees to 27 degrees. In the Arroyo Grande field the oil comes from sandstone at the base of the Fernando, and has a gravity of 14 degrees. There is much undeveloped territory in all these fields, which promises to be highly productive.

Forty-three oil companies are listed as being interested in the district; 12 of these own all the producing wells. The estimated maximum daily capacity of the field on January 1st, 1907, was 40,400 barrels. The storage capacity for the field is 1,464,000 barrels, not including earthen reservoirs. The oil is transported by pipe line and rail, and finally by tank steamer.

The production of oil in the Santa Maria district has been increasing rapidly in the last four or five years, but the increase, as shewn by the figures of actual production, does not fully indicate the increase of the capacity of the

field. Lack of storage capacity, inadequate transportation facilities, and the low price of crude petroleum are factors which have kept down the total produced and marketed. Well drilling has been going on steadily ever since the field was opened, but only in a few instances have the companies pushed their production up to the limit for any length of time.

The production of the district including the Santa Maria, Lompoc and Arroyo Grande



A CHARACTERISTIC CALIFORNIAN OIL SECTION.

fields for the last five years is as follows:—

							Barrels.
1902	..	..	..	..	..	..	99,283
1903	..	..	..	..	..	..	178,140
1904	..	..	..	..	..	..	1,367,174
1905	..	..	..	..	..	..	2,565,966
1906	..	..	..	..	..	..	4,906,513
Total	..	..	..	..	..	..	9,117,081

The estimated maximum capacity of the field January 1st, 1907, was 40,400 barrels per day.

Santa Maria Field.

For convenience of discussion, the proved portion of the Santa Maria field has been roughly divided into six areas, based largely on the geographic position of the wells. The following are the areas discussed:—Hall-Hobbs-Rice ranch, Pinal-Fox-Hobbs, Pinal-Folsom-Santa Maria Oil and Gas Escolle, Hartnell-Brookshire, Grasiola-Western Union and Eastern-Western Union.

Hall-Hobbs-Rice Ranch Area.

The area here discussed comprises the California coast, Meridian, Coblentz, Santa Maria Oil Co. (Keyser) Hall

and Hall, New Pennsylvania, Rice ranch and Dome properties and the north-eastern part of the Hobbs lease, and occupies the ridges and canyons which extend northward from the east end of the main Graciosa Ridge. The wells are located on the north-western flank of the Mount Solomon anticline, at or immediately north-west of the point at which it changes from a north-eastward to a south-eastward trend. In addition to the main anticline there appear to be one or more local flexures, the Hobbs anticline and the cycline between it and the Mount Solomon anticline being the most prominent.

Three oil zones are recognisable in the area under discussion, although practically all of the strata from the top of the uppermost zone to the bottom of the lowest are more or less petroliferous at one point or another. The first productive zone (A) is penetrated at a depth of 1,600 feet or more, varying according to the position of the well topographically and relative to the axis of the anticline. Its top is from 550 to 700 feet above the top of zone B in this area. Zone A is productive for a distance of 20 to more than 500 feet. Of course, this does not mean that the beds are productive in any one well for the whole distance of 500 feet, but that throughout the zone, alternating barren and productive beds occur at such close and as a rule irregular intervals as to preclude their practical differentiation.

The second oil zone (B) is from 550 to 700 feet below the top of zone A, and its upper limit is about 300 or 400 feet above the top of zone C, although it can hardly be said to be distinct from C in all the wells, so rich in oil are some of the intervening strata between them. True, sands of medium grain, in addition to the productive hard-shale zones, yield the oil in zone B.

The third oil zone (C) is encountered in some of the deeper wells nearest the axis of the main anticline. This zone has been penetrated for as much as 150 feet, the whole being very very rich in petroleum. It is overlain by a considerable thickness of black shale, also more or less petroliferous, between which and the rich zone is a thin, hard, "shell" layer. The oil-yielding rock is a true sand, coarse in places, and even becoming pebbly toward its base in certain portions of the area. To the coarseness of the material is doubtless due the great productiveness of the zone.

The oil in the Hall-Hobbs-Rice ranch area runs from 26° to 29° B., and is dark-brown in colour. Gas accompanies the oil, and also occurs isolated under some of the more impervious "shell" layers in the shale. No water is reported in any of the wells.

The production of the wells varies from 300 to something over 2,000 barrels per day. Those wells which penetrate the lowest or C zone are the best producers. It is said that where a number of wells are located comparatively near together, the production of each well is largely dependent on whether or not the adjacent wells are producing, a fluctuation of 50 per cent. resulting from this cause in some instances.

(To be continued.)

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AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR MAY.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during May were as under:—

		1906. Quantities. Gallons.		1907. Quantities. Gallons.
CRUDE—				
Baltimore	.. ..	—	.. ..	—
Boston and Charlestown	.. ..	—	.. ..	—
Delaware	.. ..	12,024	.. ..	—
New York	.. ..	—	.. ..	—
Philadelphia	.. ..	5,424,408	.. ..	1,570,101
Galveston and Sabine	.. ..	3,549,085	.. ..	5,152
Total	.. ..	8,985,517	Total	1,575,253
Total value for the month, 1906..	.. ..		.. ..	\$507,837
" " " 1907..	.. ..		.. ..	\$99,076
NAPHTHAS—				
Baltimore	.. ..	—	.. ..	—
Boston and Charlestown	.. ..	—	.. ..	6,850
Delaware	.. ..	—	.. ..	—
New York	.. ..	1,488,219	.. ..	2,147,541
Philadelphia	.. ..	790,313	.. ..	3,349
Galveston	.. ..	—	.. ..	—
Total	.. ..	2,278,532	Total	2,157,740
Total value for the month, 1906..	.. ..		.. ..	\$208,469
" " " 1907..	.. ..		.. ..	\$197,871
ILLUMINATING—				
Baltimore	.. ..	4,388	.. ..	100
Boston and Charlestown	.. ..	3,961	.. ..	11,436
Delaware	.. ..	—	.. ..	—
New York	.. ..	39,634,197	.. ..	41,803,131
Philadelphia	.. ..	23,253,855	.. ..	21,492,138
Galveston	.. ..	—	.. ..	3,000
Total	.. ..	62,896,401	Total	63,309,805
Total value for the month, 1906..	.. ..		.. ..	\$3,974,553
" " " 1907..	.. ..		.. ..	\$3,970,017
LUBRICATING—				
Baltimore	.. ..	560,040	.. ..	452,578
Boston and Charlestown	.. ..	12,116	.. ..	17,297
Delaware	.. ..	—	.. ..	—
New York	.. ..	7,053,881	.. ..	4,645,252
Philadelphia	.. ..	2,623,046	.. ..	3,887,278
Galveston	.. ..	12,558	.. ..	—
Total	.. ..	10,261,641	Total	9,002,405
Total value for the month, 1906..	.. ..		.. ..	\$1,330,026
" " " 1907..	.. ..		.. ..	\$1,162,868
RESIDUUM—				
Baltimore	.. ..	—	.. ..	—
Boston and Charlestown	.. ..	245,000	.. ..	220,000
Delaware	.. ..	—	.. ..	—
New York	.. ..	1,731,653	.. ..	6,075
Philadelphia	.. ..	4,419,516	.. ..	2,647,554
Galveston	.. ..	—	.. ..	4,741,764
Total	.. ..	6,396,169	Total	7,615,393
Total value for the month, 1906..	.. ..		.. ..	\$196,778
" " " 1907..	.. ..		.. ..	\$240,952
TOTAL MINERAL OILS—				
Baltimore	.. ..	564,428	.. ..	452,678
Boston and Charlestown	.. ..	261,077	.. ..	255,583
Delaware	.. ..	—	.. ..	—
New York	.. ..	49,919,974	.. ..	48,601,999
Philadelphia	.. ..	36,511,138	.. ..	29,600,420
Galveston	.. ..	3,561,643	.. ..	4,749,916
Total	.. ..	90,818,260	Total	83,660,596
Total value for the month, 1906..	.. ..		.. ..	\$6,217,663
" " " 1907..	.. ..		.. ..	\$5,670,784

Mr. D. A. Sutherland, managing director of the Commonwealth Oil Corporation, Ltd., is on his way to England after a few months' stay upon the properties of the Commonwealth Corporation.

Mr. A. Beeby Thompson (Messrs. Thompson and Hunter, consulting engineers, 1, Leadenhall Street, E.C.), has recently returned from a tour through Trinidad and the Peruvian oil fields. His partner—Mr. Campbell Hunter—left London on Thursday for Baku.

THE PETROLEUM FIELDS OF ALASKA.

A VALUABLE REPORT.

(Concluded from page 21.)

Occurrences of small quantities of oil in metamorphic rocks are known in California and Washington, where the oil is considered to have migrated into the metamorphic rocks subsequent to their alteration. A similar explanation may account for the Alaska occurrences. The writer would suggest as a possible explanation that the metamorphic rocks, which are known to be separated from the tertiary shales by a fault, are overthrust upon the shales along a fault plane of low shade, and that the oil at the seepages west of Ragged Mountain is coming through the metamorphic rocks from underlying shales.

The seepages at the head of Katalla Slough and on Redwood, Burls and Chilkat creeks are all in the soft shales, which have previously been called the Katalla formation. Those between Redwood and Burls creeks are associated with conglomerates of presumably higher position. Such of the seepages of the Nichawak region as have been seen by the writer are in shales which closely resemble those referred to above. The Cape Yaktag seepages are said to be in Miocene sandstones and shales.

The position of the seepages with reference to the structure is somewhat vague and uncertain. Those west of Katalla are on steeply folded rocks in which the structural features have not been determined. The group on Redwood Creek and Katalla Slough is apparently in close proximity to a fault. The Burls and Redwood Creek groups are each near the axis of an anticline, the Redwood Creek anticline being probably broken near or west of its axis by a fault. The seepages between Burls and Redwood creeks are on monoclinical conglomerates. The general structure of the Nichawak region has not been determined, but the rocks have steep dips and are probably closely and complexly folded. The Yaktag region is said to have an anticline near and parallel to the coast, north of which the rocks

have a monoclinical northward dip. The seepages are said to occur on the north flank of the anticline, parallel to and not far from its axis.

Outlook for Profitable Exploitation.—If oil is found in quantity it will almost certainly be in circumscribed areas, and the location and boundaries of these areas will be of the utmost importance in the development of the field. The position, size and shape of these productive areas cannot be foretold in advance of all drilling or at the present stage of development. The wells which have been drilled in this region are so few, most of them are so shallow, and so little oil has been obtained that they give almost no light on the occurrence of oil in the rocks. But if at least one area were outlined wholly or in part by the known position of productive and non-productive wells it would then be possible to determine the relation of the occurrence of the oil to the geology and form the known facts of the geology to outline other possible productive areas in advance of drilling. For this reason it is of the utmost importance to obtain complete and accurate records of all wells, and to use the information and experience thus gained in locating subsequent wells.

Difficulties of Drilling.—Much difficulty has been encountered in keeping the wells vertical, and delay and expense have resulted from the necessity of frequently reaming out the holes in order to straighten them. The crooked holes are the natural result of the steep inclination of the beds, with frequent alternations from hard to soft rocks. Whenever the drill passes from a soft rock to a harder one dipping at a steep angle the drill tends to be deflected and a crooked hole results. This difficulty will always be encountered in this region, and will increase the time and cost of drilling. It will, however, become less as the knowledge of the local conditions becomes greater, for the tendency of the drill to deflect can be lessened by drilling slower when the deflecting bed is struck and by special shaping of the tool, and the

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holes can be straightened more quickly when the drillers have had more experience in the region.

Caving.

When a well in soft or fractured rock stands uncased too long, the rock caves in, often burying and frequently causing the loss of the tools, and sometimes it is necessary to abandon the well. Much delay has been caused in this way at most of the local wells, and it has added greatly to the cost of drilling. It has been impossible on this account to drill several of the wells as deep as they would otherwise have gone. The only remedy is to case the well at the proper time, and when the drillers know better the rocks with which they are dealing they will be able to anticipate the caving and introduce casing at the time when it is needed. Conditions may in this way be expected to improve in the future, and thus the cost will become less and the speed greater and it will be possible to sink wells to greater depths.

Water.

The rocks of this region are full of water, and consequently large amounts are encountered in all the wells. This is undesirable for two reasons—the pressure of the column of water in the well keeps the oil back in the rocks and prevents it from coming out into the well, and the water reduces the effective weight of the drill and acts as a cushion between the drill and the rock, in both ways reducing the power of the blow. The only remedy is in casing off the water, which cannot be done too often without reducing the size of the hole to undesirable dimensions and finally limiting the depth to which it can be drilled without pulling the casing and going back and reaming out the hole.

Remoteness from Supplies.

The remoteness of this region from a base of supplies increases the cost of labour and of freight, which will be discussed under a subsequent heading, and also increases the time and expense of drilling, by making it necessary either to carry an exceptionally large equipment of fishing and repairing tools and of general supplies or to be subject to delays in ordering special tools from a long distance.

(To be concluded.)

FACTS CONCERNING THE MID-CONTINENTAL FIELD.

It is interesting to note, says the *Oil Investors' Journal*, that the Mid-Continent region to-day is capable of producing 200,000 barrels of oil a day in its present stage of development. The Glenn pool is at flood-tide with a production in excess of 118,000 barrels a day. As late as June 13th a well in the extreme south-eastern part of the field came in flowing 100 barrels an hour. There are now nearly 500 producing wells in the Glenn district, and new ones are being completed at the rate of three a day. Those professional conservatives who said in March that the field was then at its best with a daily output of 40,000 barrels, and who have reluctantly admitted from month to month that while the production was increasing it would soon decline, are still waiting to see their "dope" verified. The purchase of a 40-acre lease this month by one of the pipe-line companies for \$105,000 indicates the opinion that the old heads have of this field. It is a wonder. No other word describes it. Of course, there have been similar developments before, but that does not detract from the remarkable richness and productiveness of the Glenn pool. In November, 1906, a little more than six months ago, the total pipe-line runs from the entire Mid-Continent region averaged 64,840 barrels a day. The Prairie Oil and Gas Co. at that time was the only large buyer of crude in Indian Territory. To-day the three pipe-line companies—the Prairie, the Gulf and the Texas—are running 65,000 barrels from the Glenn field alone, and the Prairie Co. is taking nearly as much again from the other districts in the Territories and Kansas. At the present time the average daily pipe-line runs from the Glenn pool are divided about as follows:—Prairie Co., 40,000 barrels; Gulf Co., 16,000 barrels; the Texas Co., 9,000 barrels. In addition, producers are storing about 20,000 barrels a day in their own tankage and in ground reservoirs. The output of the field for the month promises to be 2,500,000 barrels. The pipe-line companies are building steel storage at the rate of over 1,000,000 barrels a month, and a dozen individual operators and companies are putting up their own steel storage. One concern, the Associated Producers' Co., already has completed and filled steel tankage to the amount of nearly 1,000,000 barrels.

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THE OIL FIELDS OF TRINIDAD.

Another Valuable Geological Report.

(Continued from page 18.)

A brief account of the evidence obtained in the field, and from other sources, must be given. The Pitch Lake lies upon a well-defined plateau 138 feet above sea level. The area has recently been affected by gradual upheaval, as proved by raised beaches in the neighbourhood, and it is probable that the plateau at no distant date, geologically speaking, stood at or below sea level, and is in fact a raised beach or coastal bench itself.

The geological structure is a gentle anticline, which runs roughly east and west, the lake being upon the crest. The vicinity of the lake is almost entirely covered with surface deposits concealing the solid evidence. The underlying rocks are lightly compacted, and are often disintegrated to a great depth, and the surface wash of disintegrated material covers almost all the ground. The "brown shales" mentioned by Messrs. Lewis and Gordon, though often giving an appearance of stratification, are not tertiary sediments, but recent surface deposits. The brown colour is due to the presence of finely-divided bitumen or asphalt dust.

The La Brea oil sand, a deposit of variable thickness, is the source of all the pitch. It crops out to westward of the lake in the coast section, to eastward of the plateau, and also to the southward near the Vessiny River, and in inliers in hollows. Its outcrop has been mapped for several miles. This oil rock is covered by a fine bluish clay, which, when impregnated sufficiently with bituminous material, has occasionally become ignited and burned to porcellanite, *e.g.*, south and south-west of the lake. The clay in its turn is covered by a soft yellow sand, the disintegrated outcrop of which covers much of the area north of the lake.

Wherever the capping of clay is thin, or the oil rock is merely covered by superficial deposit, or is actually exposed, soft asphalt exudes, forming small cones, examples of which may be seen beside the road between the Asphalt Co. works and the lake, and at several places north and west of the lake.

The oil rock where it is exposed on the shore west of the lake, is a fine dark sand, so full of bitumen that the superficial layers actually flow slowly, the semi-liquid asphalt as it exudes carrying the inorganic material of the rock with it. Pieces of this rock may be twisted off in the fingers and rolled into pellets. An analysis of a specimen by the Government Analyst gives the following results:—

Water, etc., volatile at 100° C.	..	..	..	5.24
Bitumen .. .. .	..	..	..	15.1
Non-bituminous organic matter	..	..	..	29.70
Ash .. .. .	..	..	..	49.96
				100.00

Soluble in petroleum ether, 8 per cent.

This specimen was taken from a weathered tide-washed outcrop. The quantity of non-bituminous organic matter is remarkable, but, as will be seen later, the recent work by Mr. Clifford Richardson has thrown much light upon this point.

A shallow boring (about 60 feet) was made in the outcrop of oil rock west of the lake many years ago. It is situated 205 feet from the sea, and yields a small quantity of rather heavy oil. A sample taken from the surface gave the following results on analysis by the Government Analyst:—

Specific gravity .. .. .	..	..	..	..	950
Mineral matter .. .. .	..	..	..	..	02 per cent.
On distillation:—					
Water .. .. .	..	..	..	..	1.2
Petroleum spirit .. .. .	..	..	..	..	12.8
Illuminating oil (150°-300° C.) ..	..	..	..	..	36.0
Lubricating oil (above 300° C.) ..	..	..	..	..	32.0
Residual bitumen .. .. .	..	..	..	..	12.3
Loss .. .. .	..	..	..	..	5.7
					100.0

In the sea, at a distance of about 200 yards west south-west of the last-mentioned locality, there is an oil spring. A smooth patch on the water is often conspicuous, and in it drops of brown oil may be seen floating, while gas bubbles up all around and a film of oil sufficient to prevent waves from breaking sometimes covers the surface for a considerable distance.

In the hollow east of the plateau on which the lake is situated, the oil rock crops out again, and large flattened cones of semi-liquid asphalt may be seen, with slight evolution of gas. In these cones or rather pools of soft pitch, the material can be seen exuding, and it is streaky with the quantity of inorganic matter brought up with the bitumen, indicating that either the cohesion of the oil rock breaks down when it is exposed, or that superincumbent material is carried up by the flow of asphalt and gradually absorbed in it.

Borings made by the Asphalt Co. in 1893 have furnished additional evidence of the underlying oil rock. In the centre of the lake a depth of 135 feet was reached without touching bottom, but at 1,000 feet from the centre, on the north side, fine sand was struck at 80 feet, then more asphalt, and at 90 feet asphaltic sand, *i.e.*, the more or less disintegrated oil rock. A boring south of the lake also struck a hard asphaltic sand, obviously the same which crops out to the east-south-east, the course of which can be traced by lines of asphalt cones. The oil rock cannot be identified in the coast section in Guapo Bay, but porcellanite and lignitic shales covered by sands and sandy clays probably represent it, and indicate that the oil rock is thinning out and the oil-producing conditions of this horizon ceasing in this direction.

The next evidence to be considered is the composition of the lake pitch. This is treated of so fully in Mr. Clifford Richardson's book, "The Modern Asphalt Pavement," that a few brief quotations will suffice. The average composition of the lake pitch is given as:—

Water and gas .. .. .	..	..	..	..	29 per cent
Organic matter, not bitumen .. .. .	..	..	..	..	7.
Mineral matter .. .. .	..	..	..	..	25.
Bitumen .. .. .	..	..	..	..	39.
					100.

The asphalt is an "emulsion" of these constituents. The inorganic matter consists of fine sand or clay with a small quantity of iron oxide and soluble salts. Mr. Clifford Richardson gives an analyses of the mineral matter as follows:—

Si O ₂ ..	..	70.64	....	Na ₂ O..	..	1.56
Al ₂ O ₃..	..	17.04	....	K ₂ O ..	..	.35
Fe ₂ O ₃..	..	7.62	....	SO ₃ ..	..	.97
CaO ..	..	.70	....	Cl ..	..	.22
Mg O ..	..	.90	....			—
						100.0

This corresponds with the composition of a normal sandstone, with slight admixture of argillaceous material. The microphotograph of the mineral matter which Mr. Clifford Richardson publishes ("The Modern Asphalt Pavement," page 34) shews all the characteristics of the *debris* from an ordinary fine waterborne sandstone, the grains not being greatly abraded as in wind-blown sands, nor having any of the characteristics of silica deposited from solution. The finest material is a fairly pure clay. The percentage of "organic matter, not bitumen" presents a point of great interest; as recorded above, the percentage of this in the La Brea oil sand was as much as 29, while in the Rio Blanco oil sand it was only .46, a difference great enough to enable these different types of oil rock to be distinguished easily. The recent work by Mr. Clifford Richardson upon the absorptive properties of fine clays for bitumen explains the occurrence of this percentage of hitherto little-understood constituent in asphalts, oil rocks and manjak. In a paper read before the American Society for Testing Materials, and afterwards published in the *Engineering Record*, he describes experiments made with Trinidad lake-asphalt, and tests of the absorptive and "adsorptive" properties of various fine clays upon solutions of bitumen. The results arrived at are, briefly, that fine clays have the power of decolourising bituminous solutions, by absorbing or "adsorbing" a proportion of the bitumen in such a manner that it cannot again be removed by the action of solvents. Thus the greater part of the "organic matter, not bitumen," can be proved to be bitumen which cannot be removed in solution. The presence of water may also have some effect in favouring this absorption, but the proportion of fine clay present seems to be the more important factor. Applying these results to lake-pitch and the oil rock from which it is derived, we have at once an explanation of the presence of argillaceous material in the asphalt, and we must increase the percentage of bitumen in lake pitch by almost, if not quite, 7 per cent., and the percentage in the oil rock probably by a much greater amount. This makes the breaking down of the cohesion of the oil rock on exposure much more intelligible.

The lake itself is, by the latest survey made under the supervision of the Inspector of Mines, 137 acres in extent, the margins being covered in places by superficial deposits washed down from the surrounding ground. In the centre the surface of the asphalt is about six inches higher than near the sides, and for some distance from the centre there are no water-channels. Then comes a broad zone characterised by water-channels dividing the surface into roughly circular areas with

rounded edges. Near the shore the pitch is harder as a rule, and less cut up by water-channels. Near the centre there is an area of very soft asphalt, where a little gas issues slowly, while there are similar but much smaller patches near the western margin and between it and the centre. The distribution of these areas of soft pitch indicates the proximity to the parent oil rock, whence continuous but minute exudation of pitch is still taking place. Lest there should be any misunderstanding upon this point, it must be repeated that Messrs. Louis and Gordon have proved conclusively that the lake is exhaustible, and is being depleted at a fairly rapid rate, but the presence of the patches of soft asphalt, and the difference in level between the centre and sides make it clear that additions of asphalt, probably amounting to only a few tons in the year, are still being made, just as the same material is exuding in the ground to the eastward and south-eastward of the lake.

The gas given off from the lake is chiefly sulphuretted hydrogen formed by the action of water on sulphur compounds in the asphalt. It is seen bubbling up in the water-channels. A small quantity of oil gas, however, may be detected issuing from the soft patches.

The "pitch-lands" of La Brea village are undoubtedly, as pointed out by Messrs. Louis and Gordon, an overflow from the lake. This overflow has taken and occupied the valley of a small stream, known as the "pitch-lake ravine," and has, in effect, pushed the stream westward, where it now flows at a higher level than its original course. There is no evidence of any exudation of asphalt in the village lots, though gas has been detected issuing from the ground on one or two occasions. Weathered surface deposits underlie as well as overlies much of the land asphalt, proving that the overflow, which has ceased some years ago, took place under subaerial conditions.

From the evidence detailed in the preceding pages the origin of the Pitch Lake can be explained as follows:—

In the first stage the La Brea oil sand, covered by its cover-clay and succeeding sediments, lay below sea-level. Under a flexuring movement acting in a north and south direction, the area was subjected to elevation, a gentle east and west anticline being gradually formed, and the strata above the oil rock were raised within the zone of denudation, though probably still below sea-level. Denudation of the crest of the anticlinal took place till the reduced thickness of puddled cover-clay was not sufficiently tenacious to resist the upward pressure of gas from the oil rock. A mud volcano would be the result, and as denudation and elevation both continued, would increase in size. All this probably took place beneath the water. As the covering was gradually removed, oil began to exude and to dry up to a sticky asphalt.

About this time the anticline was probably becoming more clearly defined, and the site of the pitch lake began to emerge from beneath the sea as a hollow in which discharge of gas and oil was continually taking place, while mingling with inorganic minerals would be favoured by tides and wave action. This stage is marked by the formation of the plateau, suggesting that the surface remained at or near sea-level for a considerable time.

(To be continued).

The American Oil Market.

New York, Week ended July 6th.

Reports from the oil fields have been somewhat interrupted by the holiday, but those received during the week have failed to indicate any important developments in the territory of Pennsylvania classification. The two good producers which were recently brought in on the Mahan and Ward farms in the Congo pool of West Virginia have shewn a decline to 270 and 225 barrels respectively, but indications are considered promising for shallow sand operations. On the whole, the pool is maintaining a creditable average, and the east side is now the centre of activity. The search for new territory throughout the lower south-west fields, says the *Oil, Paint and Drug Reporter*, is being pushed with the same degree of fervour, and while completions have shewn little out of the ordinary, some test wells, which are almost ready for drilling, are the object of considerable interest. A material increase in development work in the fourth sand territory in Monongalia county, W.Va., is reported. Five and ten-barrel producers seemed to be the rule in South-eastern Ohio, following new operations, and second tests disclosed little beyond light pumpers. In Pennsylvania a show for a 45-barrel producer in the Brush Creek field, Allegheny county, was the most encouraging report. In the Mid-Continent fields the same activity prevails, but in the Glenn pool in Indian Territory, which was the scene of such a disastrous storm last week, efforts have been chiefly directed toward repairing the crippled districts. Despite the handicap that operators have encountered, several wells good for 350 barrels have been reported. Work of an encouraging character is in progress at Morris, in the Creek Nation, and a tank with a capacity of 35,000 barrels, is to be built on the ground. The oil has previously been shipped to Texas. Operations have also been stimulated in the Choctaw Nation, oil and gas companies being keen competitors to secure leases along the Western borders. The Illinois fields are reported less active, a check to development work having been experienced in the difficulty of caring for the product above ground. A review of the Illinois operations during the week ended June 22nd shews 156 wells completed, of which but 16 were dry, and the production amounted to 14,742 barrels. Crawford county led with 66 completions and a production of 5,985 barrels. Beaumont (Tex.) interests are largely represented in what is declared to be promising as a record producer in St. Laundry Parish, La.

REFINED AND PRODUCTS.—The market for refined has remained firm, but the demand for new business has been comparatively light during the week, the only engagement reported being one of 70,000 cases for Melbourne or Sydney, October-November shipment. Clearances for the week shewed a gain, amounting to 11,077,540 gallons, against 10,171,680 gallons during the previous week.

The export movement in naphtha was of lighter proportions, aggregating 17,380 gallons for the week, against 169,950 gallons during the previous week. Exports of naphtha for the eleven months ending May for the last three years are recorded by the Department of Commerce and Labour at Washington, D.C., as follows:—

	Quantities. Gallons.	Values. Dollars.
1907	22,089,709	2,283,630
1906	31,434,217	2,438,135
1905	28,372,984	2,396,481

Residuum has been in better request for export, clearances for the week amounting to 27,250 gallons, against 15,000 gallons during the previous week.

CLOSING QUOTATIONS.

	CRUDE.	Week ended	
		June 29. 1907.	July 6. 1907.
Pennsylvania crude in bbls.		\$8.20	\$8.20
Pennsylvania crude in bulk		4.75	4.75
Residuum, bbls. for export		6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		July 6. 1906.	July 6. 1907.
Tiona		1.74	1.78
Pennsylvania		1.64	1.78
North Lima		0.98	0.94
South Lima		0.93	0.89
Indiana		0.93	0.89
CANADIAN OIL:			
Petrolia		1.37	1.34

REFINED—FOR EXPORT.

		Week ended	
		July 6.	
Barrels, cargo	per gal.	\$8.45	@10.45
Philadelphia		8.40	@10.40
Bulk, New York		5.00	@7.00
Bulk, Philadelphia		4.95	@6.95
Cases, New York		10.90	@13.90
Cases, Philadelphia		10.85	@13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		June 29. 1907.	July 6. 1907.
3,000 to 10,000		10.80	10.80
1,000 to 3,000		10.85	10.85

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		June 29.	July 6.
120 fire test, S.W.	in barrels	12	12
130 fire test, S.W.		12½	12½
150 fire test, W.W.		13½	13½
In bulk from tanks		10	10
300 fire test		13½@14	13½@14

NAPHTHA AND GASOLENE.

		Week ended	
		June 29.	July 6.
Naphtha, crude, car. lots, 68 @ 72 deg.		17.00	17.00
Gasolene, 86 deg.		24.00	24.00

PENNSYLVANIAN OIL RUNS from June 27th to July 1st were:—June 27th, 192,207; June 28th and 29th, 224,564; June 30th, 185,214; and July 1st, 174,436. For the month of May, 3,020,463.

THE DELIVERIES OF PENNSYLVANIA OIL from June 27th to July 2nd were:—June 27th, 147,040; June 28th, 171,851; June 29th and 30th, 313,694; July 1st, 189,747; and July 2nd, 176,535. For the month of May, 5,558,710.

CLEARANCES FOR THE WEEK.

During the week ended July 5th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1906.
Refined	11,077,540	225,320,690	241,760,559
Crude	—	1,039,925	229,050
Naphtha	17,380	4,323,120	11,291,507
Residuum	27,250	371,487	1,000

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended July 6th	14,770,953
Total from New York, from Jan. 1st, 1907	351,652,174
Same period last year	323,259,809
Increase	28,392,365
From United States, week ended July 6th	28,417,219
Total from United States, since Jan. 1st, 1907	622,310,481
Same period last year	605,770,917
Increase	16,539,564

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The "Review" Shipping List.

JULY 19, 1907.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Terneuse ..	Lisbon	Arr. July 10	FRANCE MARIE ..	Marseilles ..	Philadelphia	P. Tarifa,
ALICE ISABELLE..	Philadelphia	Sables	P. Del. Break.,				June 17
		d'Olonne	June 30	GEESTEMUNDE ..	Stettin & Tyne	New York ..	P. Dunnet Head,
ALEMBIC	New York ..	Sydney (C.B.)	L. July 5				July 13
AMERICAN	Antwerp	New York ..	Arr. July 6	GENESSE	Manchester	New Orleans	P. Fastnet,
APPALACHEE	San Francisco	Hankow	L. July 6				July 11
APSCHERON	Ibrail	Spezia	Arr. July 16	GEORGIAN	Liverpool ..	Philadelphia	P. O. Hd. Kinsale
ARAL	Tyne	Philadelphia	Arr. July 14	PRINCE			July 10
ARAS	Philadelphia	Manchester	P. Del. Break.,	GOLDMOUTH	Bremerhaven	—	P. Malta,
			July 2				July 16
ARGYLL	—	—	Coasting U.S.	GUTHEIL	Christiana ..	Philadelphia	L. Tyne,
			(Pacific)				July 16
ASHTABULA	San Francisco	Shanghai ..	At Taku,	HAINAUT	Alexandria..	Bona	Arr. July 10
			June 6	HARRY	Cette	Kustendje ..	L. July 11
ASTRAKHAN	Hamburg ..	Philadelphia	In Tyne,	WADSWORTH			
			July 12	HELOIS	Philadelphia	Nordenham	L. July 9
ATLAS	—	—	Coasting U.S.	HERMIONE	London and	Philadelphi	P. Lizard,
			(Pacific)		Thameshaven		July 10
AUGUSTA	Barry	Havana	P. Lundy Island,	HOTHAM	Swansea	Batoum	At Gibraltar,
			July 11	NEWTON			July 5
AUGUST KORFF..	Philadelphia	Birkenhead	L. July 8	HOUSATONIC	Philadelphia	Flushing....	Off the Wight,
AUREOLE	Sunderland	New York ..	Arr. July 14				July 14
AZOV	—	—	Trading on W.C.	IMPERIAL	—	—	Tr. on Lakes btn.
			of South Amca.				U.S.A. and Can.
BAKU STANDARD	Rouen	Kustendje ..	Arr. July 13	JOANNIS COUTZIS	Batoum	Rouen	P. Constant'ple,
BALAKANI	Batoum	London	Arr. July 15				July 12
BATOUM	Kobe	Palembang..	L. July 11	J.B.AUG.KESSLER	Rotterdam ..	—	P. Malta,
BAYONNE	Philadelphia	Granatello ..	P. Leghorn,				July 9
	and Genoa		July 11	JAMES BRAND	Manchester	Kustendje ..	P. Barry Island,
BEACON LIGHT ..	Newport	Philadelphia	Arr. July 11		and Barry		July 9
BEME	Rangoon....	Kurrachee ..	L. June 13	JULES HENRI	Philadelphia	Tarragona ..	P. Del. Break.,
BLOOMFIELD	Hamburg ..	Philadelphia	Arr. July 10				June 25
BORJOM	Alexandria..	Batoum	Arr. June 24	KURA	Batoum	London	L. July 16
BRILLIANT	Philadelphia	Copenhagen	L. July 11	LA CAMPINE	Philadelphia	Antwerp	P. Lizard,
BROADMAYNE	London	Philadelphia	Arr. July 8				July 17
BULLMOUTH	Hankow	Shanghai ..	Arr. May 25	LA FLANDRE	New York ..	Ghent	L. July 4
BULYSES	Batoum	—	P. Suez,	LA HESBAYE	Antwerp	Batoum	P. Gibraltar,
			July 8				July 9-10
BURGERMEISTER	Stettin	New York ..	Arr. July 9	LA MADELEINE ..	Algiers	Brest	Arr. June 16
PETERSEN				LA VIGUESA	Philadelphia	Vigo	Arr. June 13
CALCUTTA	San Francisco	Shanghai ..	L. May 27	LACKAWANNA....	Sabang	Port Said ..	P. Perim,
CAPTAIN A. F.	London	Sabine Pass	Arr. June 17				July 15
LUCAS				LANSING	—	—	At San Francisco,
CARDIUM	Singapore ..	—	At Suez,				May 29
			July 15	LE COQ	Cardiff	Philadelphia	P. Barry Island,
CATANIA	Seattle	Port Harford	Arr. June 26				July 6
CAUCASIAN	Kustendje ..	Antwerp	L. July 13	LOUTSCH	Kustendje ..	France	L. July 9
CHARLOIS	Philadelphia	Flushing....	P. Del. Break,	LUCERNA	Tyne	Philadelphia	Arr. July 14
			July 3	LUCILINE	Philadelphia	Rouen	P. Havre Rds.,
CHESAPEAKE	New York ..	Flushing....	L. July 6				July 15
CHESTER	Antwerp	Philadelphia	Arr. July 7	LUMEN	Calais	Tyne	L. July 17
CIRCASIAN	Buenos Ayres	Callao	P. Monte Video,	LUX	Cardiff	New York ..	Arr. July 10
PRINCE			May 5	MANHATTAN	Alexandria..	N. America	L. July 6
CLAM	Freshwater..	Suez	L. July 8	MANNHEIM	Rotterdam ..	New York ..	P. Lizard,
COL. E. L. DRAKE	New York ..	San Francisco	Arr. July 1				July 16
COWRIE	New York ..	Venice	At Gibraltar,	MARGARETHA ..	Avonmouth	Batoum	P. Constant'ple,
			July 15-16				July 5
CUYAHOGA	Manchester	Philadelphia	Arr. July 6	MAVERICK	Redondo....	Astoria	Arr. June 30
CYMBELINE	Manchester	Philadelphia	P. Browhead,	METEOR	Batoum	Vladivostock	Arr. May 30, and
			July 7				Sd. June 9
CZAR NICOLAI II.	Batoum	Hamburg ..	Arr. July 12				Nagasaki
DAGHESTAN	Port Arthur	Rouen	L. July 14	MEXICAN PRINCE	Liverpool ..	Cienfuegos ..	Arr. June 27
	(Texas)			MIRA	Penarth	New York ..	L. July 13
DAKOTAH	San Francisco	Canton	L. June 28	MUREX	Shanghai ..	—	L. July 1
DELAWARE	Palembang..	—	At Suez,	NARRAGANSETT..	Tyne	New York ..	Arr. July 12
			July 7-8	NERITE	—	—	Tr. in China
DEUTSCHLAND ..	Hamburg ..	New York ..	P. Dunnet Head,				Seas
			July 8	NEW YORK	New York ..	Southampton	Arr. July 14
DIAMANT	Hamburg ..	Philadelphia	L. Tyne,	OCEAN	Kustendje ..	Antwerp	Arr. July 12
			July 15	OILFIELD	Kustendje ..	Bordeaux ..	P. Gibraltar,
EDWARD	Port Arthur	Antwerp	L. Norfolk (Va.),				July 17
DAWSON	(Texas)		July 8	ORANJE PRINCE..	Flushing....	Tyne	Arr. July 5
ELAX	Singapore ..	—	L. July 6	ORIFLAMME	Philadelphia	Rouen	P. Del. Break,
ELSIE MARIE	Hamburg ..	New York ..	Arr. July 7				July 7
ENERGIE	Stettin	Philadelphia	Arr. July 7	OSCEOLA	Genoa	New York ..	L. Lisbon,
ERIVAN	Batoum	Hamburg ..	Off the Wight,				July 3
			July 17	OTTAWA	Tampico	London	P. Sabine Pass,
EIELKA	Philadelphia	Seville	Arr. July 11				July 3
	and Alicante			OURAL	Thameshaven	Tyne	Arr. July 15
EUPLECTELA	Tyne	Philadelphia	P. Dunnet Head,	PALEMBANG	Hong Kong	Borneo	L. May 16
			July 12	PAULA	Philadelphia	Aarhus	P. Del. Break.,
EXCELSIOR	New York ..	Rotterdam ..	L. July 10				July 2
EZIO	—	—	Coasting Peru	PECTAN	London	Emden and	At Emden,
						Galveston	July 16

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PENNOIL.....	Philadelphia	Rotterdam..	Arr. July 16	SNOWFLAKE.....	Banes	Norfolk (Va.)	L. July 6
PERLAK	Singapore ..	Swatow	L. June 12	SPONDILUS	Cardiff.....	Singapore ..	Arr. July 15
PHOEBUS	Hamburg ..	New York ..	P. Dunnet Head, July 12	STANDARD	Stettin.....	New York ..	P. Dunnet Head, July 6
PINNA	Antwerp ...	San Francisco	P. St. Vincent (C.V.), June 13	STROMBUS	Samboe	—	L. July 6
POTOMAC	Avonmouth	Philadelphia	P. Barry Island, July 14	SURAM.....	New York ..	Hull and Tyne	L. July 4
PROMETHEUS....	Hamburg & Tyne	New York ..	P. Dunnet Head, July 14	SUWANEE	Hull.....	Philadelphia	L. July 15
PRUDENTIA	Tyne	Batoum	L. Constant'ple, July 5	SVIET	Odessa	Rouen.....	L. Kustendje, July 13
QUEVILLY	Philadelphia	Rouen.....	P. Del. Break., July 5	TELENA	Soesoe.....	—	L. Suez, July 18
RION.....	Philadelphia	London	L. July 16	TEREK.....	Kustendje ..	Hamburg ..	P. Heligoland, July 16
ROCK LIGHT	New York ..	Belfast	P. Torr Head, July 18	TIFLIS	Antwerp	Philadelphia	Arr. July 12
ROMANY.....	Thameshaven	Rotterdam ..	Arr. May 29, in Pt. June 30	TIOGA	Sunderland ..	New Orleans	Arr. July 9
ROSSIJA	Hartlepool ..	Archangel ..	L. July 2	TONAWANDA	San Francisco	Shanghai ..	L. July 1
ROTTERDAM	Barry	Bahia and Santos	At Bahia, July 10	TROCAS	Shanghai ..	—	L. July 3
RUSSIAN PRINCE	New Orleans	Havana	L. Port Eads, July 7	TURBO.....	Batoum	Hamburg ..	Arr. London, June 18
SALAHADJI	—	—	Tr. Sts. Settlements and Java Seas	TUSCARORA	Calcutta	Boston & New York	At Boston, July 3
SAN CRISTOBAL..	Antwerp....	Tyne	Arr. July 17	TWINGONE	Rangoon ..	Madras	L. July 16
SAN IGNACIO	Pasages	Philadelphia	L. July 9	VEDRA.....	Alexandria ..	Aroe Bay ..	At Singapore, June 27
DE LOYOLA	—	—	—	VILLE DE DIEPPE	—	—	In Port Havre, July 11
SAXOLEINE	Tyne	Philadelphia	P. Cape Race, July 15	VOLUTE	Hankow	—	L. July 7
SEMINOLE.....	Shanghai ..	San Francisco	At Calcutta, June 25	WASHINGTON....	New York ..	Hamburg ..	P. Scilly, July 17
SINGU	—	—	Tr. in East Indies	WEEHAWKEN	Barrow	Philadelphia	P. Fastnet, July 7
				WILLKOMMEN....	New York ..	Swinemunde.	L. July 7
				WINNEBAGO	Itozaki	San Francisco	Arr. July 11

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

July 19th, 1907.

The following are the prices of Refined petroleum:—Russian, Spot 6d.-6½d.; Roumanian, 6½d.; American, 6½d.-6¾d.; Water White, 7½d.-7¾d.

LUBRICATING OILS

are unaltered, prices remaining:—

American pale, £7 7s. 6d. to £11.
American dark cylinder, from £8 5s.
American filtered cylinder, from £11 2s. 6d.
Shellene, £5. No. 1 Russian, £10 7s. 6d.

TURPENTINE.

There has not been much change since our last report, prices being:—American, Spot 42s., July to December 43s. 1½d., September to December 43s. 3d., January to April 44s. 6d.

LIVERPOOL OIL MARKET.

July 19th.

Refined oils are quiet, and sellers quote 6½d. for Russian, Galician or Roumanian; and 6½d. to 7½d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0½d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, July 19th.

Refined, in cases, is steady at 10.90; Standard White, 8.45; Credit balances, 1.78c.

PHILADELPHIA, July 19th.

Standard White is still quoted at 8.40.

RUSSIA.

BAKU, July 15th.

The Baku oil market is very firm. Light crude oil, spot, 32 copecs per pood; residuals, in ships, 32½ copecs; kerosene, in ships, 45½ copecs.

BELGIUM.

ANTWERP, July 12th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, July 12th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34.25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, July 12th.

The kerosene market is firm. The price of American Standard White is 7.25 marks per 50 kilos, Russian, 7.00 marks.

ROUMANIA.

July 7th.

Crude oil from different fields, including pipe line charges, per 100 kgs.	Francs.
Refined oil, exclusive of taxes	4.00-4.20
Motor benzine, including taxes	8.00- —
Benzine, doubly refined	23.00-24.00
Residuals in tank waggons, at refinery	25.00-26.00
Paraffin	3.60-3.70
	120.00-125.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.50- —
Benzine, sp. gr. 0.710-0.715	23.00-24.00
" sp. gr. 0.715-0.720	22.00-23.00
" sp. gr. 0.730-0.740	15.00-16.00
" sp. gr. 0.745-0.755	11.00-12.00

INDIA.

BOMBAY, June 29th.

Market strong.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg.	Rs. 6 0 2
" Chester, 125 deg.	4 8 2
" Monkey Brand, 125 deg.	4 2 2
" Bulk, 125 deg. (in local made tins)	3 11 0
" 125 deg. (8 Imperial gallons)	3 1 0
" "White Camelia" brand, 125 deg.	No stock.

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair	3 7 0
Sumatra "Rising Sun," bulk, per unit	3 1 0
" " " " tins, per pair	3 11 0
Silverlight cases, per case	5 2 0
Sumatra, "Anchor" per case	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

*Specially prepared for .
this Journal by . . .
the Custom House.*

FOR THE WEEK ENDED 8TH JULY, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
July.	LONDON—			
3	Anglo-American Oil Co. ..	Lub.	44,000	New York
3	Homelight Oil Co. (Hermione)	Lamp	208,670	Batoum
3	"	"	1,493,250	"
3	T. H. Lee	M.Lub.	415	Hamburg
3	Scott's Wharf	"	1,200	New York
3	Anglo-American Oil Co. (Augusta)	Gas	849,770	Philadel.
4	Page, Son and East ..	Lub.	20	Antwerp
5	Schenker and Co. ..	"	770	"
5	T. H. Lee	M.L.Gr.	190	Hamburg
8	A. Brown and Co. ..	Lub.	2,400	Philadel.
8	Mordaunt Bros. ..	"	2,500	"
8	Fielder, Hickman and Co. ..	"	11,400	"
8	Lubricating & Fuel Oils, Ltd. ..	"	10,250	"
8	Scott's Wharf	"	5,000	New York
8	J. Owen	Tar oil	2,100	Rotterdam
8	Page, Son and East ..	M.Lub.	120	Antwerp
8	"	M.L.Gr.	200	"
	LIVERPOOL—			
2	W. W. Jones, Dooly and Co. ..	M.Lub.	150	New York
2	Vacuum Oil Co.	M.L.Gr.	1,000	"
2	"	Lub.	9,560	Boston
4	Meade-King, Robinson & Co. ..	M.Lub.	10,400	Hamburg
5	"	"	28,760	Philadel.
5	Crew, Levick and Co. ..	"	20,530	"
5	Bowring Petroleum Co. ..	"	800	"
5	Worthington and Boler ..	"	4,840	"
5	"	M.Colza	240	"
5	Vacuum Oil Co.	M.Lub.	17,200	"
5	A. Hopps and Sons ..	M.Colza	5,370	"
5	George B. Taylor ..	M.Lub.	76,600	"
6	American Line	"	4,200	"
6	J. T. Fletcher and Co. ..	M.L. Gr.	160	Antwerp
8	Gracie, Beazley and Co. ..	"	50	New York
8	Burnaby and Chantrell ..	"	1,120	"
8	W. Gibson and Sons ..	Lamp	2,050	Boston
8	Liverpool Warehousing Co. ..	M.Lub.	360	New York
8	George B. Taylor ..	"	52,360	"
8	Vacuum Oil Co.	Lub.Gr.	21,600	"
8	"	Lub.	80	"
	BARROW—			
2	Anglo-American Oil Co. ..	Naphtha	895,430	"
2	"	Benzine	154,710	"
	BRISTOL—			
4	Anglo-Bosphorus Oil Co. ..	M.Lub.	4,000	Hamburg
6	Pickfords, Ltd.	Lub. Oil and Paste	1,050	"
	GOOLE—			
2	Goole Steam Shipping Co. ..	M.Lub.	900	Antwerp

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
July.	GRIMSBY—			
2	J. Sutcliffe and Son ..	Lub.	60	Hamburg
2	"	"	300	Antwerp
2	"	"	360	"
5	"	"	1,650	"
	HULL—			
2	T. Wilson, Sons and Co. ..	"	2,480	St. Petersburg.
2	Wilsons and N.E. Railway Shipping Co. ..	"	880	Hamburg
2	"	"	6,320	Antwerp
2	"	"	2,160	"
4	T. Wilson, Sons and Co. ..	"	240	New York
4	Hull & Netherlands S.S. Co. ..	Tar oil	2,400	Rotterdam
4	"	"	2,400	"
5	Wilsons and N.E. Railway Shipping Co. ..	Lub.	200	Hamburg
5	T. Wilson, Sons and Co. ..	"	2,280	New York
6	"	"	240	Amsterdam
	MANCHESTER—			
2	Worthington and Boler ..	M.Lub.	960	Philadel.
3	J. T. Fletcher and Co. ..	"	320	Antwerp
5	W. Hodgson and Co. ..	"	530	Hamburg
6	Geo. B. Taylor	"	113,200	Philadel.
6	British Pet. Co. (Mira) ..	Illum.	1,381,760	New York
6	Homelight Oil Co. ..	"	1,699,160	Batoum
	(Cymbeline)			
6	Geo. B. Taylor	M.Lub.	120	Hamburg
8	Co operative Wholesale Soc. ..	"	75	Rouen
8	Crew, Levick and Co. ..	"	13,130	Philadel.
8	Meade-King, Robinson & Co. ..	"	32,000	"
8	"	M.Colza	2,000	"
8	"	M.Lub.	10,400	Hamburg
	NEWCASTLE—			
2	Tyne-Tees Steamship Co. ..	Rus.Lub.	1,000	"
2	"	"	160	"
3	"	"	400	Antwerp
6	"	"	400	Hamburg
8	"	"	3,680	Antwerp
	PLYMOUTH—			
4	Bristol Steam Nav. Co. ..	Lub. Gr.	250	"
	SOUTHAMPTON—			
2	American Line	M.Lub.	600	New York
	ABERDEEN—			
4	R. Connon, Reid and Co. ..	L. Paste	260	Hamburg
	GLASGOW—			
2	Clyde Shipping Co. ..	M.Lub.	120	Antwerp
2	J. and A. Allan	Lub.	75,600	Philadel.
2	"	M.Colza	6,000	"
3	Anchor Line	M.Lub.	35,600	New York
3	"	M.Colza	8,000	"
3	"	M.L.Gr.	2,400	"
5	Donaldson Bros.	Lub.	2,400	Baltimore
8	Anchor Line	M.Lub.	5,680	New York

MIDLAND RY-CARRIAGE & WAGON CO., LTD., & Reduced.

Midland Works,
BIRMINGHAM.

—BUILDERS OF—

OIL AND OTHER

TANK WAGONS,

And Every Description of Rolling Stock

With WOOD or STEEL

UNDERFRAMES.



Anglo-American Oil Co., Ltd.,

SOLE IMPORTERS

Finest American Lamp Oils





WHITE ROSE   

. and .

 ROYAL DAYLIGHT.

Pratt's Motor Spirit

PACKED IN SEALED TWO GALLON CANS.

Universally used by all leading Motor
Manufacturers, Motorists, Railway and
Motor Bus Companies.    

IN USE AND FOR SALE EVERYWHERE.

== QUALITY TELLS. ==

To Dealers only.

DATE	PORT AND IMPORTERS	DESCRIPTION	NO. OF GALLS.	PORT WHENCE.
July.	LEITH—			
2	J. Currie and Co. ..	Lub.	800	Hamburg
2	W. Graham-Yooll and Co. ..	Illum.	2,270	"
4	G. Gibson and Co. ..	Lub.	2,560	Antwerp
5	J. Cowan ..	"	15,600	U.S.A. via Treport
6	J. Currie and Co. ..	"	140	Hamburg
	GRANGEMOUTH—			
2	J. Currie and Co. ..	"	2,000	"
2	" ..	"	120	"
2	W. Graham-Yooll and Co. ..	Illum.	1,200	"
3	" ..	"	1,200	"
	BELFAST—			
1	J. C. Pinkerton and Co. ..	Lub.	125	"
	Total for Week ..		7,389,965	

FOR THE WEEK ENDED JULY 15TH, 1907—

	LONDON—			
9	Anglo-American Oil Co. ..	Lub.	129,800	New York
9	Ocean Oil Co. ..	"	4,800	Philadel.
9	Lub. and Fuel Oils, Ltd. ..	"	12,250	"
9	Schlieman's Oil Co. ..	"	5,000	St. Petersburg
2	Mordaunt Bros. ..	"	3,300	Philadel.
9	London & India Docks Co. ..	M.Lub.	3,400	Hamburg
9	R. Park and Co. ..	Lub.	780	Marseilles
9	Worthington and Boler ..	M.Lub.	2,800	Philadel.
9	Page, Son and East..	"	2,000	New York
9	Mordaunt Bros. ..	"	2,250	"
9	Beck and Pollitzer ..	Lub.Gr.	430	"
9	Stern Soneborn Oil Co. ..	M.Lub.	3,800	Hamburg
10	Anglo-American Oil Co. ..	Lub.	34,800	New York
10	Felder, Hickman and Co. ..	"	23,680	"
10	London and India Docks Co. ..	M.Lub.	11,370	"
10	Felder, Hickman and Co. ..	Lub.	17,680	"
10	" ..	Lub.Gr.	5,890	"
10	" ..	Lub.	6,600	Philadel.
10	Juett and Cain ..	"	4,000	"
10	Thames Steam Tug & Lig. Co. ..	"	2,400	"
10	Wilkins, Campbell and Co. ..	M.Lub.	2,440	"
11	Mercantile Lighting Co. ..	Lub.	490	New York
11	Anglo-American Oil Co. ..	"	59,800	Philadel.
11	Taylor Bros. ..	"	140	New York
11	Lub. and Fuel Oils Co. ..	Engine Oil	501,030	Batoum
	(Oural)			
11	" ..	Black Oil	223,060	"
11	" ..	Cylin. Oil	5,000	"
11	Leach and Co., Ltd. ..	M.Lub.	120	Ghent
12	Trinidad Lake Asp. Pav. Co. ..	Lub.	2,400	Philadel.
12	Bowring Petroleum Co. ..	M.Lub.	9,400	"
12	Anglo-American Oil Co. ..	Lub.	73,200	"
12	E. J. Wilkinshaw ..	"	10,000	"
13	Consolidated Petroleum Co. ..	R.Lamp	1,041,850	Batoum
	(Balakani)			
13	" ..	"	388,000	"
13	Lubricating & Fuel Oils, Ltd. ..	Eng. Oil	75,000	"
	(Oural)			
13	Mordaunt Bros. ..	Lub.	4,100	New York
15	Scott's Wharf ..	"	3,000	"
15	American Express Co. ..	"	200	"
15	G. W. Sheldon and Co. ..	"	500	"
15	Schlieman's Oil Co. ..	"	2,800	St. Petersburg
15	" ..	Lub. Gr.	3,100	Hamburg
15	" ..	Lub.	2,300	"
15	London and India Dock Co. ..	"	5,300	"
15	Leach and Co. ..	M.L.Gr.	960	Ghent
15	Wilkins, Campbell and Co. ..	"	240	Antwerp
15	Page, Son and East..	"	480	"
15	" ..	"	320	"
	LIVERPOOL—			
9	Pickford's ..	"	360	Hamburg
9	" ..	L. Paste	500	"
9	Evan, Leigh and Sons ..	Lub.	2,000	Boston
9	Vacuum Oil Co. ..	"	9,000	"
9	Geo. B. Taylor ..	M.Lub.	400	New York
9	Meade-King, Robinson & Co. ..	"	5,600	"
10	" ..	"	31,200	Hamburg
10	Valvoline Oil Co. ..	"	1,230	New York
11	Geo. B. Taylor ..	"	97,520	Philadel.
11	W. B. Dick and Co. ..	"	27,760	"
11	Meade-King, Robinson & Co. ..	"	2,000	"
11	Vacuum Oil Co. ..	"	5,600	"
11	Crew, Levick and Co. ..	"	15,930	"
11	Pickford's, Ltd. ..	"	400	New York
11	Meade-King, Robinson & Co. ..	"	4,800	Baltimore
12	" ..	"	23,640	Philadel.
12	Worthington and Boler ..	"	1,400	"
12	G. B. Taylor ..	"	31,760	New York
13	" ..	"	49,920	"
13	American Line ..	"	1,830	"
13	Crew, Levick and Co. ..	"	1,370	New York
15	W. B. Dick and Co. ..	"	16,420	"

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
July				
15	C. C. Wakefield and Co. ..	M.L. Gr.	640	Antwerp
15	F. Leyland and Co. ..	M.Lub.	3,730	N. Orleans
	BRISTOL—			
9	W. Smith and Co. ..	"	29,400	New York
9	" ..	Lamp	800	"
9	H. R. James and Sons ..	M.Lub.	18,200	"
9	" ..	M.Colza	3,400	"
11	Pickfords ..	M.Lub.	400	"
11	Ford and Canning ..	Lub.	1,000	"
20	Anglo-American Oil Co. ..	R.Lamp	910,110	"
	(Potomac)			
11	H. R. James and Sons ..	Lub.	2,400	"
15	" ..	"	7,400	"
	GRIMSBY—			
13	J. Sutcliffe and Son ..	"	160	Antwerp
	HULL—			
9	Wilsons and N.E. Railway Shipping Co. ..	"	160	Hamburg
9	" ..	"	10,400	"
9	" ..	"	480	Antwerp
10	" ..	"	1,070	"
10	Hull & Netherlands S.S. Co. ..	Tar oil	2,400	Rotterdam
10	T. Meredith, Roberts and Co. ..	M.Lub.	250	Antwerp
10	Anglo-American Oil Co. ..	R.Lamp	863,450	Philadel.
	(Suwanee)			
12	" ..	Resid.	131,020	"
12	Wilsons and N.E. Railway Shipping Co. ..	Lub.	160	Hamburg
	MANCHESTER—			
9	D. Currie and Co. ..	M.Lub.	1,200	"
10	J. T. Fletcher and Co. ..	"	720	Antwerp
11	George B. Taylor ..	"	93,640	New York
13	Pickford's, Ltd. ..	Lub. Oil and Paste	70	Hamburg
15	G. Fairclough ..	M.Lub.	2,730	New York
	NEWCASTLE—			
10	Furness, Withy and Co. ..	M.Lub.	4,000	Baltimore
13	P. H. Matthiessen and Co. ..	Cylinder	100	Bergen
13	Tyne-Tees S.S. Co. ..	R.M.Lub.	5,400	Antwerp
	MIDDLESBRO'—			
11	J. J. Sutherland ..	M.Lub.	1,400	"
	GRANGEMOUTH—			
9	J. Currie and Co. ..	Lub.	2,000	Hamburg
9	" ..	Tar Oil	400	"
9	" ..	Lub.	6,000	"
9	" ..	L. Paste	500	"
10	Hopkins, Paton and Co. ..	Lub.	720	Antwerp
12	J. Currie and Co. ..	"	1,400	Hamburg
	LEITH—			
9	G. Gibson and Co. ..	"	2,280	Antwerp
11	" ..	"	200	"
11	J. Currie and Co. ..	"	80	Hamburg
	GLASGOW—			
9	Clyde Shipping Co. ..	M.L.Gr.	230	Antwerp
	BELFAST—			
13	G. Heyn and Sons ..	Lub.	320	Riga
15	J. C. Pinkerton and Co. ..	"	350	Antwerp
	DUBLIN—			
11	Anglo-American Oil Co. ..	R.Illum.	387,300	New York
	(Potomac)			
	Deduct to Correct :—		5,520,970	
	SOUTHAMPTON—			
29/5	Barringer and Son (Terek) ..	Illum.	1,330	Batoum
	BARROW—			
13/6	Burnyip and McDougal ..	Fuel	29,180	Pt. Arthur, Texas
	(Broadmayne)			
	Add to Correct :—			
	BELFAST—			
1/6	Anglo-American Oil Co. ..	Lamp	9,070	New York
	(Potomac)			
	Total for Week ..		5,499,530	
	Total for the Fortnight ..		12,889,495	

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.)

APPLICATION FILED IN GREAT BRITAIN.

Manufacture of Improved Liquid Combustibles and Solvents from Mineral Oil.—Rudolf Hense, Birkbeck Bank Chambers, Southampton Buildings, London. No. 14671 of 1907.

The Petroleum Review.

By PAUL DVORKOVITZ.

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AUGUST 3RD, 1907.

No. 404.

Editorial Notes.

As the lengthy article upon another page **Baku during 1907.** proves, the first six months of the present year have witnessed genuine progress in the Baku oil fields. For the most part, the feeling of unrest has subsided, and in view of the high prices ruling for petroleum, every operating firm is concentrating all its available energy upon increasing production as much as possible. The present market is extraordinary in more ways than one, and as a consequence, the producing firms have perforce resorted to extraordinary methods in order to immediately bring their production to as high a figure as possible. New drilling is not in evidence, but old abandoned wells whose working during normal periods has been unprofitable are now turned to good account to the very favourable market conditions. This condition of things may be sufficient for a time to keep up production, but in the long run the various operating firms must of necessity carry on an active drilling programme if the production of the fields is to be permanently maintained at its old figure. With prices standing at the figures of the past few months the producing firms are, as a whole, "coining" money, but, of course, this does not apply to the companies managed in London. Their position is still about as hopeless as ever, although crude oil can command over 30 copecs per pood.

The Shell Transport and Trading Co., **The Last of the "Shell."** Ltd., now lives in name only, as one of those remarkably successful links with the past—as one of those striking examples of what can be accomplished by a master mind bent upon attaining a certain goal. From start to finish the history of the "Shell" has been of a phenomenal character, and the success which its founder achieved for it will long live in the memory of those shareholders whose fortune is to be associated with so courageous an enterprise. The evolution of time brings into existence many things which cause us to look regretfully at the passing of the "old order," and we personally have recently experienced those pangs of pain, as we have noticed the familiar words in Billiter Street—"M. Samuel and Co.," and "the 'Shell' Transport and Trading Co.," taken down to make room for the "new order." By the founding of the Anglo-Saxon Petroleum Co., the interests of the "Shell" are administered in this country as well as those of the now associated Royal Dutch Co., while in the Far East, the Bataafsche Petroleum Maatschappij becomes the owner of the properties formerly worked by the two separate concerns. It is thus that the "Shell" Co. sinks out of existence, except the minor part which its directors will play in the conduct of the amalgamated companies. It has been a wise step in the interests of the shareholders, but that indomitable perseverance shewn from first to last by Sir Marcus

Samuel and his colleagues deserved a far better fate. There is, however, one consolation, and that is that though the firm of M. Samuel disappears as managers of the company's affairs, we are glad to see that most of the members of it will be associated with the new company upon which their assistance will be of as great a value as it has been on the board of the "Shell," and now that the amalgamation has removed all clashing interests, everything points to the future being more successful than the past.

That Stormy Petrel—Petrol. Petrol is having a very stormy time of it just now. The Motor Union Fuels Committee has been sitting discussing the subject of alternative fuels in the face of what they appear to think is a coming famine, and as a result of their conclusions, the motor fraternity has become considerably agitated. The Fuels Committee find that petrol cannot keep pace with the demand, and that ere long alcohol and benzol will be chiefly used for motive power in cars—a conclusion which shews that they have been very "far-seeing." But for the present generation, and possibly the next, there need exist no apprehension of danger as to any scarcity of supply, and simultaneously with the publication of the report of the Fuels Committee, the announcement of a reduction in the retail price of all petrol on the market comes with full significance. The fact is that all the alarm which has been created has been quite unnecessary, and the less motorists concern themselves with the unreliable statements made in the daily press, the better it will be. So long as the demand exists for petrol there will be plenty of it, and at a price which counts as nought in the running of a motor car.

American Imports into Germany. Upon another page we publish a number of statistics relative to the petroleum import trade of Germany for the first half of this year, together with the countries of origin of such imports. This latter information is especially interesting as shewing how firm a hold the American oil has upon Germany—a hold which is maintained in the face of strong competition, and in many cases unjustifiable attacks. To-day Germany is indebted to America for her petroleum imports possibly more than she ever was in the past, and the figures for the first six months of this year shew that in the case of illuminating oil, America sends to Germany more than eighty per cent. of that country's lamp oil, the remainder being made up of very small fractions, the largest being eight per cent. coming from Russia. Of lubricating oil, too, America is to the fore, her 47 per cent. for last year now being increased to 53 per cent. In the case of benzine, however, we look to the Far East as supplying the majority of spirit to Germany, and for the first half of this year, over 64 per cent. of Germany's benzine imports came

from Dutch India, Roumania being next on the list with about one-fifth of that amount. The German market, however, can be said to be essentially American, as the figures given elsewhere prove.

A general increase is noted in the **June in American oil field operations during the American June, and though the increase in new Oil Fields.** production is not very pronounced, it is very significant as shewing two things: the considerable amount of energy which is being infused in the work of oil production in the various fields, and the success which followed it. So far as the production of light grade oil is concerned, the yield of the Pennsylvanian fields still declines, yet this decrease is far more than compensated for by the unexpected remarkable yields from the wells in the more western fields of America. Illinois is the happy hunting ground of the American oil operator to-day, and during the month between six and seven hundred wells were completed, the largest number yet recorded, the new production coming close up to 20,000 barrels daily. The Gulf fields also held up very well, the Humble and Jennings territories being somewhat extended. Toward the end of the month the production in these districts rose to over 35,000 barrels daily, Sour Lake and Saratoga both increasing their yield. In view of the early completion of the trunk pipe lines from the Mid-Continental fields to Texas, it is anticipated that there will shortly be a revival of operations in these remarkably productive territories, but for the present production is being curtailed as much as possible, owing to the transportation facilities being unable to keep pace with the enormous yield of oil that awaits removal to the refineries. Taking the month of June all round, it may be said that it has been fairly satisfactory, for prices are advancing in many territories.

BAKU PRODUCTION IN JUNE.

The total production of crude oil at the Baku oil fields in June amounted to 39,498,000 poods.

The production of the leading firms was as under:—

	Poods.
Nobel Bros.	4,900,000
Caspian and Black Sea Society	3,000,000
Caspian Society	2,300,000
Baku Naphtha Co.	2,100,000
Mantascheff and Co.	1,800,000
Mirzoeff Bros.	1,400,000
Russian Naphtha Co.	1,200,000
Bibi-Eybat Petroleum Co., Ltd.	1,100,000
Schibaieff Petroleum Co., Ltd.	1,100,000
Moscow-Caucasian Co.	1,100,000
Naftalan Co.	1,000,000
Baku Russian Petroleum Co., Ltd.	1,000,000
Pitoeff and Co.	1,000,000
Zoubaloff	900,000
Nagieff	800,000
Russian Petroleum and Liq. Fuel Co., Ltd.	700,000
European Petroleum Co., Ltd.	600,000
Tiflis Co.	500,000
Shikhovo Co.	500,000
Neft Co. (late Tumaieff)	500,000

It is announced that in addition to the three tank steamers which Messrs. Lane and Macandrew are building, two by Messrs. Armstrong, Whitworth and Co., Ltd., and one by Messrs. Sir J. Laing and Sons, Ltd., they have taken estimates for the building of three others. The three which have been ordered will carry 7,000 tons of oil each.

LONDON OIL SHARE MARKET.

FRIDAY, AUGUST 3RD, 1907.

Business continues to be very disappointing on the London Stock Exchange, the continued decline in gilt-edged securities checking all tendency to improvement.

The Oil Share Section has been particularly stagnant with the exception of Shell Transport Ordinary and Preference, which have naturally received some considerable attention, owing to the late developments of the company, the former having risen from 43s. to 44s. to 48s. 6d. to 49s. 6d., although they are a shade easier at 47s. to 48s. at the moment, while the Preference have improved $\frac{1}{8}$ from $9\frac{7}{8}$ - $10\frac{1}{8}$ to 10 to $10\frac{1}{4}$.

Anglo-Russians have fallen $\frac{1}{32}$ to $\frac{1}{16}$ - $\frac{1}{8}$, and Assam Oil have risen $\frac{1}{16}$ to $\frac{9}{16}$ - $\frac{11}{16}$, Baku Ordinary at 3s. 3d. to 3s. 9d., Preference 5s. to 6s. and Bibi-Eybats at $\frac{1}{4}$ - $\frac{3}{8}$ having made no movement whatever. Californian Oilfields have lost $\frac{1}{8}$ at $5\frac{3}{4}$ -6, while Russian Ordinary have gained 1s. at 5s. 6d. to 6s. 6d., the Preference being without change at the same figure, Debentures rising to 58-63. European Debentures are quoted 75-79, and Schibaieff Ordinary have advanced 1s. to 4s. 6d. to 5s. 6d., although Preference are unaltered.

The fortnightly settlement disclosed no salient features to comment upon, and to-day's latest prices are given on page 68.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 1st August, 1907, as follows:—

The tin plate trade continues active, but to meet competition, makers have reduced their prices, and we quote to-day 3d. per box less than last week for forward delivery, as at foot. On Saturday next the whole of the mills in South Wales close down for a week's holiday, and in consequence of this and the reduction of output owing to the recent spell of hot weather, it is estimated that fully 500,000 boxes of tin plates will be kept out of the market. The effect of this will probably be felt a little later on.

1C 18 $\frac{1}{2}$ × 14	124 sheets	110 lbs.	15/4 $\frac{1}{2}$ per box.
1C 19 $\frac{1}{2}$ × 14	120 "	110 "	15/4 $\frac{1}{2}$ "
1C 20 × 10	225 "	156 "	21/6 "

F.o.b. Wales. Tin lining and iron hooping extra.

EXPORTS OF TIN PLATES.

The exports of tin plates for the first six months of this year have been as under:—

	June, 1906	June, 1907	Six months ended June 30, 1906	Six months ended June 30, 1907
	Tons.	Tons.	Tons.	Tons.
Russia	128	422	563	3,826
German /	2,612	3,270	14,991	20,949
Holland	1,517	2,735	14,441	14,863
Belgium	736	659	6,649	3,967
France	2,207	2,004	12,349	13,654
Portugal	420	1,221	4,776	5,306
United States	4,192	4,765	24,774	33,197
British East Indies	2,931	4,693	25,955	29,245
Australia	1,950	965	8,795	6,855
Canada	1,373	2,483	6,544	10,568
Other countries	6,480	9,569	57,451	62,843
Total	24,546	32,786	177,288	205,273

THE "SHELL" TRANSPORT AND TRADING COMPANY, LIMITED.

ANNUAL MEETING OF SHAREHOLDERS.

The annual general meeting of the shareholders of the "Shell" Transport and Trading Co., Ltd., was held on Monday, at Winchester House, E.C., the chairman of the company, Sir Marcus Samuel, Bart., presiding.

The report, together with the statement of accounts to the end of 1906, were presented and taken as read. The report shewed that including the balance brought forward from 1905, and after providing for depreciation, management, and other expenses, the balance standing to the credit of the profit and loss account was £392,370 11s. 5d., out of which the preference dividend (absorbing £50,000) had been paid, leaving a balance of £342,370 11s. 5d. at disposal.

The directors recommended that £70,000 should be appropriated as a provision to cover such expenditure as may be required to make the company's steamers and installations comply with the agreements with the Royal Dutch Co.

The dividend already paid was the maximum permitted for 1906 under these agreements.

By the arrangements with the Royal Dutch Co., the agreement between the "Shell" Co. and M. Samuel and Co., for the management of the company's affairs was cancelled as from the 1st January, 1907, and proposals for the future management would be placed before the meeting.

The directors had pleasure in recording the registration in Holland of the Bataafsche Petroleum Maatschappij, and the registration in the United Kingdom of the Anglo-Saxon Petroleum Co., Ltd.

Those two companies were those established by the Royal Dutch Co. and the "Shell" Co. to carry out the agreements.

The directors thanked the shareholders for the support given them in connection with the prolonged negotiations which have now been happily brought to a successful issue, and which they felt assured would prove to the advantage of the company.

At the special general meeting of the company, held on the 15th May, 1907, authority was given to the directors to issue up to 500,000 further ordinary shares. Of that number the directors had offered 300,000 at a premium of 10s., and those had all been applied for. The authority to issue the further 200,000 shares would only be availed of if and when necessary.

During the past year the volume of products shipped by the Nederlandsch Indische Industrie en Handel Maatschappij was satisfactory, as the following statement shewed:—

	1906.	1905.	1904.
	Tons.	Tons.	Tons.
Kerosene	123,642	124,164	73,197
Liquid Fuel	154,056	148,560	129,027
Benzine	16,614	3,561	6,477
	<u>294,312</u>	<u>276,285</u>	<u>208,701</u>

On the invitation of the directors, Mr. H. W. A. Deterding, Dr. A. J. Cohen Stuart and Mr. W. H. Samuel had since the period covered by the statement of accounts joined the board.

The retiring directors were Messrs. Jardine, Rickmers, S. Samuel, and W. F. Mitchell. To the great regret of his co-directors, Mr. Jardine did not seek re-election, but Messrs. Rickmers, S. Samuel and Mitchell (being eligible) offered themselves for re-election.

Sir MARCUS SAMUEL, in moving the adoption of the report and balance-sheet, said:—

I have the pleasure to submit to you the ninth annual report of the "Shell" Transport and Trading Co., Ltd., which is of particular interest, seeing that it is the last time in which the figures will be presented in their present form. Including the balance brought forward from the year 1905, there is a sum to the credit of profit of £567,501 7s. 7d. We have placed to the provision for depreciation of steamers and installations, £100,528 18s. 8d., and we have paid the final loss arising from liquidation of the European oil business £41,795 17s. 6d.

A perusal of the balance-sheet will shew that our anticipations of a greatly improved return for our products were justified. Had it not been for the agreement under which our dividend for 1906 was limited to 5 per cent., our earnings would have enabled us to easily pay 12½ per cent., since after making provision for a sum of £70,000 to enable us to place the steamers and installations in the condition called for by our agreement with the Royal Dutch Co., we are enabled to carry forward the large sum of £172,370 11s. 5d., as against £85,355 6s. 10d. last year.

I must explain why so large a sum as £70,000 is necessary as a provision for subsequent equipment of installations and steamers. The "Shell" Co. had granted a repairing lease to the Asiatic Petroleum Co., as had also the Royal Dutch Co., and each company undertook that before the amalgamation their installations and steamers should be put in perfect order.

Nothing will give the shareholders of this company a better idea of the ramifications of the business and of its world-wide character than an enumeration of the places and of the description involving this large outlay—an outlay which, had the current course of the business continued, would not have been chargeable to 1906 at all, but would have been defrayed as ordinary working expenses as the expenditure was made.

I will commence with Bombay, where, by reason of the requirements of the Port Trust for the enlargement of the harbour, the whole of the "Shell" Co.'s installations had to be removed to Sowree. We had reason to hope that the entire cost of this removal would have been repaid by the Port Trust, but we were disappointed, and we shall have to find a sum of no less than £15,000 in this connection.

Large expenditure has been incurred by us also in connection with the Yokohama installation, as we have had to move some of the tanks from one site to another, and also to reconstruct extensive warehouses. The typhoon in Hongkong was the cause of very heavy loss to the company. The piers were washed away, whilst the embankments and some of the godowns were also destroyed, and all of this we have to make good. The installation at Karachi was seriously damaged by the recent heavy gales there, and as the tanks in Saigon and in Bangkok (all erected on piles) were found to have subsided, under the conditions of the leases we granted we had to put these right too. Certain of the steamers were overdue for survey, and the repairs necessitated by wear and tear, also, under the terms of the agreement, had to be made good by us, so that this sum of £70,000

is easily accounted for, but arises very largely indeed from exceptional circumstances, and whilst not properly chargeable to the accounts of 1906, our shareholders will recognise the wisdom of the board in making provision for it out of the profits of that year, since it will leave future earnings free for dividend purposes.

It will be seen that the shipment of treated products by the Nederlandsch Indische Industrie en Handel Maatschappij reached a total of 294,312 tons, and the bulk of this was disposed of by the Asiatic Petroleum Co. during the current year. The result, therefore, to the "Shell" Co. was the largest return that they had ever received in any one year, the profits credited in our balance-sheet from that venture being after writing off £20,922 18s. 6d. for reserve fund and £66,015 2s. 9d. for depreciation. In this connection I cannot refrain from mentioning the very serious trouble to which we have been exposed, in common with every other trading company or firm throughout the country, by the action of the Income Tax Commissioners.

In such a meeting as this, it is surely appropriate to call attention to the very grave jeopardy to capital in the United Kingdom if the intolerable action of those responsible for the levying of income tax is persisted in. You, as shareholders, know that we, most unfairly had to pay income tax upon the cost, amounting to £59,109 18s. 1d., of issuing our preference shares, but a more monstrous claim has since been made. We raised certain moneys in Australia for the purpose of erecting our installations there. The interest was payable in Australia, and we, of course (and, I maintain, rightly) deducted from our profits the interest which we had to pay there. The Income Tax Commissioners claim that we wrongfully deducted this, and that we were entitled to debit our creditors resident in Australia with the income tax. Such a dicta, carried to this length, must drive capital from the country. Another action taken by the Commissioners of the Income Tax is so grossly unjust that companies within my own knowledge are deliberately removing the registration from England with a view to avoiding the gross wrong which is done to their employés and members resident abroad by a new reading which the Income Tax Commissioners are attempting to set up. They claim that a return of all employés must be made by every company and firm, although these employés make their income abroad, and do not visit England for years, and that they too are liable for income tax.

The reason that I put this prominently before you is that, although we only receive a specified sum as dividend on our Nederlandsch Indische shares, the Income Tax Commissioners claim that we are liable for the amount which the company has set aside for reserve, and they also arrogate the right of investigating the amount which this Dutch company has put aside for depreciation. The Dutch income tax is infinitely more wisely and equitably levied, since only the dividend paid is liable to it. The Dutch Government hold, quite rightly, that amounts placed aside for reserve and written off for depreciation add to future profits, and consequently to their participation in them. I commend this view to our Income Tax Commissioners. It is only within the last few days that we have had final accounts rendered to us by the Asiatic Petroleum Co., which has enabled us to realise the gratifying fact that our profits had been on a materially larger scale than your directors had anticipated, and the result has been that it was not necessary for us to issue 400,000 new shares

for the purpose of paying off our liabilities and providing the new capital required by the terms of our agreements with the Royal Dutch Co., and that this purpose was effected by the issue of only 300,000 shares, which, as we have already reported to you, were all applied for. This position is very gratifying, not only from the fact that we did not need so large a sum as we had anticipated, but because we now have the power to issue a further 200,000 shares should the company's business require additional capital to be raised. I should be surprised should the necessity arise (which I certainly do not anticipate at present) if we could not obtain a very much higher price for these shares than we realised for the issue just made.

By the founding of the Anglo-Saxon Petroleum Co., Ltd., which has taken over all the assets of the "Shell" Co. and the Royal Dutch Co. properly administrable in England, and of the Bataafsche Petroleum Maatschappij which becomes the owner of the whole of the properties under the Dutch jurisdiction, the existence of the "Shell" Transport and Trading Co., Ltd., comes to an end, except the part which they play as large shareholders in the other companies—taking their share in the direction, but being in a minority. The occasion is a somewhat painful one to me, because by the capitulation of our rights in controlling it, the one territory capable, in my opinion, of providing supplies of liquid fuel sufficient to meet the naval requirements of this country has passed from British hands. No one would realise the repeated efforts that I made to avert what I look upon as a great calamity to British prestige, but I failed to convince the many eminent officials and ministers, with whom I was frequently in communication, of the vast importance of this undertaking to Great Britain.

We should have been willing to make a very considerable pecuniary sacrifice to have retained these properties, had we been able to obtain any assurance from our own Government that we should have had their support in case of any dispute with the Dutch authorities; but not only was such assurance not forthcoming, but, I venture to say, never in the annals of British trade has so gross a wrong been done to any company as that inflicted by the Indian Government, instigated and supported by the Admiralty, in classifying the "Shell" Co. as a foreign corporation, and refusing them permission to participate in the development of the Indian fields. I confess that, even at the eleventh hour, we would have hesitated about losing the control of these great territories had it not come to our knowledge that, in further researches which appeared desirable in other localities in India, the applicants for research rights were told that they would not be granted if there was any prospect of their going into the hands of the "Shell" Company! Gentlemen, "Great events from little causes spring," and I shall be greatly mistaken if, in the future, the folly—nay, I will say, the crime—of compelling a British company to part with property of vital import in the future of naval warfare is not bitterly regretted, and for this folly history must fix the blame on the right shoulders, but this I can assure you, that neither your chairman nor directors have been to blame.

Under the circumstances, Messrs. M. Samuel and Co. have ceased to be the managers of the "Shell" Transport and Trading Co., Ltd., this being one of the provisions made by the Royal Dutch Co., but I hope the shareholders will recognise that it has been under their management that the present sound condition of

the company has been reached, and I heartily congratulate you upon being able to state that, in my opinion, a magnificent position has now been attained, since instead of having practically all our eggs in one basket we are partners in widespread and well-established productive petroleum fields. Instead of being dependent upon only one refinery, which would have put us in a most serious dilemma in the event of fire, we now have a series of refineries within our working area. The united companies are on absolute rock bottom, being their own producers, and producing oil as cheaply as it can be produced in any part of the world, whilst their geographical position gives them an indisputable command of the area in which they trade. They are their own carriers, passing the oil through their own installations, and distributing it through their own agencies. I cannot imagine any business, therefore, built upon a sounder foundation. The companies are entirely free from debts. They have ample working capital, and under the able and prudent management now secured, although we naturally resign the position of managers with regret, I feel that the future conduct of the business is in safe hands. This company, however, must be represented on the boards of the Anglo-Saxon Petroleum Co. and of the Bataafsche Petroleum Maatschappij, and your directors have come to the conclusion that your interests will be best served by appointing some of their members as delegates on those boards. This will necessarily involve extra payments to the members so employed, who will also conduct such business as remains to the "Shell" Co., who will now have their separate offices and their own staff. A considerable saving will be made after the present year in the cost of management, since the extensive staff hitherto retained by the managers has been taken over by the combine. Messrs. Deterding and Dr. A. J. Cohen Stuart have been elected to the board of the "Shell" company on the nomination of the Royal Dutch, while Mr. Walter H. Samuel has also joined the board, and to our great regret Mr. Jardine, who has been associated with the company from its commencement, has retired. The board has been increased in numbers by these additions to it, and you will be asked to increase their remuneration to £6,000 per annum instead of the £4,000 per annum previously voted to the directors, who will, from their number, appoint and pay out of this sum the delegate members who will represent your interests on the boards of the two middle companies and manage the "Shell" company's business.

In practice the beneficial effects of the combination are becoming more manifest every day, and, although I cannot go into details at such a meeting as this, it will be most gratifying to you to know that the "Shell" spirit, in which we own a large percentage of the whole, is increasing in popularity and prestige every day. The journey from Peking to Paris, which has excited world-wide interest, started entirely upon "Shell" spirit, and considerable credit is due to the local representatives who, at the request of that enterprising journal, the *Matin*, made the necessary arrangements for the supply of the petrol throughout this extraordinary run. The record run by Mr. S. F. Edge on the "Napier" car at Brooklands was made on "Shell" spirit. It may interest you to know that we pioneered the import of petrol in bulk so long ago as 1901, when the first cargo of Borneo petrol came by the "Murex." Since then we have transported no less than 427,026 tons in bulk, and it is not too much to say that the

motor trade would have been impossible had it not been for the courage and enterprise of this company.

From statistics published in a trade journal, I find that the imports of Borneo and Sumatra benzine amount to 73 per cent. of the entire quantity landed in the United Kingdom in 1907. I have observed, with some amusement, a circular issued by the Fuels Committee of the Motor Union, stating that, in their opinion, based upon the dicta of a geologist or of geologists, the motor-ing world is within measurable distance of a petrol famine. I hope the gentlemen responsible for the attempt to create this scare will state upon what authority or authorities they rely, and what steps they have taken to verify their facts. In Koetei alone, we have proved territory extending over a length of more than 60 miles, containing anticlinals of oil throughout the entire area, and leaving those responsible for the direction of this company no misgiving as to their ability to maintain supplies of petrol for the world's trade. The price will necessarily depend upon whether we and other producers with whom we have to compete are obliged to produce crude oil for the sole purpose of making petrol, or whether, as at present, we can find remunerative markets for the other products which are left when the petrol is removed from the crude. There is room for a very large and rapid increase of the petrol trade before any alteration could take place in these conditions. In fact, supplies of petrol are to-day so ample that in order to endeavour to encourage consumption, as also to meet competition, we have been obliged to reduce our prices to some extent, and, so far as I can see, there is not the remotest danger of any failure of petrol supplies, even if our most sanguine hopes as to the increase of the motor industry should be amply fulfilled.

To those gentlemen who advocate the use of alcohol as a substitute for petrol, the history of the trade in Germany would prove instructive. In Germany there is a very heavy duty on petrol, so that the consumer has to pay a much higher price than in this country, and consequently very great efforts were made to employ substitutes that could be produced in the country and so be free of duty. When motor cabs were first started in Berlin, they were ordered by the authorities to use nothing but alcohol, but it was found that the cars could not be run on this spirit, and consequently every cab was allowed to use a certain quantity of petrol to start the car. This attempt by the authorities to force the cabs to use alcohol has, however, now had to be definitely abandoned, and the mask has been thrown off entirely, with the result that all motor vehicles now running in Berlin run entirely on petrol in spite of the heavy duty. Although alcohol and other substitutes may prove an excellent "bogey" with which to attempt to frighten the producers of petrol, we do not entertain the smallest misgivings that this spirit can ever become a competitor to our petrol, for the simple reason that it does not inherently contain those qualities which are essential for the running of motor vehicles. It is surely the very irony of fate that France—to whose genius the development of the motor car owes so much, and to one of whose newspapers the great enterprise to which I have already referred is due—viz., the race from Peking to Paris—should be precluded from the enormous advantage of the use of "Shell" spirit, owing to its having to pay a prohibitive duty in France through an oversight in the treaties concluded with that country by the Dutch Government which omitted to include the Dutch colonies. So great is the demand for petrol, and

so largely is the trade now dependent upon the East Indies for their supplies, that I think the course of events, viz., the irresistible demand by the French consumers to obtain the finest petrol in the world, will force the French Government to admit our petrol on the same terms as Roumanian and American. The prohibition also extends to petrol produced in British India, and it is a great argument in favour of the need of reciprocity that we are assured that if the Indian Government were prepared to make some concession on French goods imported into India, this right would be granted.

It will be necessarily many months before we shall have the pleasure of meeting our shareholders again, and, under these circumstances, you may desire to know what are the prospects for the current year. We distributed a dividend at the rate of 10 per cent. per annum on the 1st of this month, and without pledging myself in any way (since it will be obvious to you that only seven months of the current year have expired), but, subject to the maintenance of production in the fields and to the prevalent condition of the markets, I believe an intelligent anticipation of events will shew that we shall have the great pleasure of distributing the second interim dividend on the 1st of January next at a rate exceeding that of the first dividend and marking the highest dividend ever yet paid by this company. I have much pleasure in moving the adoption of the report.

Mr. A. V. D. Best seconded the motion, which, on being put, was carried with acclamation.

Sir Fortescue Flannery, Bart., said that as one of the oldest shareholders in the "Shell" Co. he had watched the concern grow from the very beginning, and he ventured to say that never had they been in so satisfactory or so splendid a position—or such a promising position—as they were that day. There was a change which had taken place since their last meeting in the arrangements for managing their business, and it was very fortunate indeed for the shareholders that those who had negotiated that change had been shareholders of the largest kind. It was also fortunate that the firm of M. Samuel and Co. should have been so ready to resign the position of managers of the company in the interests of the shareholders. The shareholders would notice that in the balance-sheet there was the item of £23,000 for management, and Sir Marcus had told them that that item would in future largely disappear, for the cost of the management would also fall upon their partners. But he especially desired to say a word or two with reference to the board. He was sure they all welcomed the new members—Dr. Cohen Stuart, Mr. Deterding and Mr. Walter Samuel. They all knew that the board would be strengthened by their acquisition, and it must be apparent to them all that the increase in the size of the board involved some increase in the fees of the directors. Therefore he had pleasure in moving that the remuneration of the directors should be increased to £6,000 per annum from January 1st, 1907.

Mr. Couborough seconded this motion which was unanimously agreed to upon being put by Sir Fortescue Flannery.

The Chairman then moved the re-election of the retiring directors and the confirmation of the new members of the board. He said he desired to express his entire concurrence with the remarks of Sir Fortescue Flannery that the board would be strengthened by the addition of those new members.

Mr. Pembroke then moved a vote of thanks to the chairman and members of the board. In doing so he

spoke of the difficult task which they had carried through, and especially commented upon the great work of Sir Marcus Samuel since the "Shell" Co. was formed. He hoped the amalgamation with the Royal Dutch would be highly advantageous for both sides, and he trusted that they would meet again next year under as promising conditions.

Sir William Bissett seconded the vote of thanks, remarking that he was an original shareholder, and had watched the fortunes of the company with great interest. He especially admired the courage and ability with which its affairs had been conducted.

The vote of thanks having been carried with acclamation, the Chairman briefly responded. As had been said, their company had needed courage to go forward as it had done and through the stormy period it had encountered, for their company was founded when they had to buy their experience. It would be interesting to the shareholders to know that the Royal Dutch Co., having developed large supplies of their own, approached the "Shell" Co. many years ago with a view to amalgamation, but the terms which they offered were not such as could be accepted, because the Royal Dutch proposed to pay them in debentures, and they would never have participated in the increased profits. The Royal Dutch saw the weakness of the position of the "Shell" Co. in having to depend upon supplies of oil from third parties, and the speaker remembered saying to the late Mr. J. B. Aug. Kessler that the only result would be that the "Shell" Co. would be forced to become producers, and he then ventured to predict that they would not spend as much money as the Royal Dutch had done in becoming producers. Well, they all knew they found Koetei, and with enormous courage they developed it, and spent nearly £1,000,000 sterling, yet the end fully justified the means. Of course, the "Shell" Co. might have gone on very successfully indeed as the "Shell" Co., but he hoped they appreciated the spirit by which their directors had been guided in sacrificing the independent existence of the "Shell" Co. for the future benefit of the shareholders. He would never have agreed to that amalgamation had he not known that they had most excellent colleagues in the gentlemen upon the board of the Royal Dutch Co., now so closely associated with their own. He had naturally resigned the principal conduct of that business with great regret, but he felt that it had gone into extremely safe and sound hands, and that the future would reveal still greater satisfaction for the general body of shareholders.

This terminated the meeting.

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THE BAKU PETROLEUM INDUSTRY.

DETAILS FOR FIRST HALF OF 1906. [*From the Trade and Industry Gazette.*]

According to telegraphic information to hand, the production of crude oil at the Baku oil fields in June amounted to 39,500,000 poods. It will thus be observed that the month's output has lately remained stationary, it having been 39,200,000 poods in April, and 39,700,000 poods in May. The total production of crude oil for the half-year amounted to 235,200,000 poods. The figures for the corresponding halves of the preceding years were: 1904, 306,900,000 poods; 1905, 270,500,000 poods; and 1906, 226,300,000 poods.

The unsuccessful results obtained last year were, of course, due to the fact that the oil fields were not completely restored after the catastrophe of the autumn of 1905. At present the oil fields are working to their utmost capacity, as the high prices ruling impel the producers to use every means at their disposal to increase their output, so as to profit by the favourable market.

The following are the main features to be observed at present in the Baku petroleum industry:—

(1.) Boring activity is concentrated mainly on wells which are already productive, and on those which have been abandoned at the time of low prices owing to their small output. The motives for this are easy to understand, as the drilling of new wells requires an enormous outlay of capital, a great deal of time, and involves considerable risks, whilst active wells, even if with a gradually declining rate of production, require only cleaning and deepening. On the other hand, there is on the producing fields a very large number of abandoned wells, the exploitation of which was not justified during the period of low prices. Thus, in 1902, when the price of crude oil stood at $4\frac{1}{2}$ to 5 copecs, a large number of wells were placed on the abandoned list, but gradually as prices recovered it became possible to resume their exploitation, and at the present moment when crude oil sells at 30 copecs it is fully worth while to repair and work the abandoned wells.

(2.) The respective places occupied by the various fields in the Baku producing industry are changing. Lately the output has been increasing at Ramany, and also at Bebe-Aibat. At Ramany, the exploitation has been begun of a portion of the drained Ramany lake, which is held on lease by the Moscow-Caucasian Co. Bebe-Aibat, a fresh field still unexhausted by protracted drilling, and possessing vast reserves of oil, has begun to yield very large quantities of oils, for some months reaching as much as 35 per cent. and 40 per cent. of the total output. The successful results achieved at Bebe-Aibat are partly due also to the fact that the majority of the firms operating there are well organised and possessed of ample working capital. On the other hand, at Saboontchi and Ramany the production has been declining. At Saboontchi the production began to decline as far back as 1901, as is shewn in the following figures:—

	Poods.		Poods.
1901	295,300,000	1903	230,500,000
1902	267,200,000	1904	218,100,000

Saboontchi suffered most by the incendiary fires in the autumn of 1905, so that for the whole of 1905 it yielded only 138,300,000 poods. The same conditions are observed at Balakhany. This field which was the first to be exploited, and is covered by an enormous number of wells, has also greatly reduced its output during the last few years, as shewn in the following figures:—

	Poods.		Poods.
1901	117,200,000	1903	88,600,000
1902	101,500,000	1904	82,000,000

However, the change which has occurred on the market has also had its effect here. The great advance in price during the last two years has enabled the producers to resume the exploitation of the old abandoned wells, and the last-mentioned two fields are gaining in importance. Of course they do not shew any actual increase in output, but they have reduced their rate of decline. It must, however, be borne in mind that the working of the old wells is only possible on a basis of high prices, and as soon as prices of crude oil will begin to move downwards, conditions at the oil fields will become reversed, *i.e.*, at Saboontchi and Balakhany there will again be a decline in output; whilst at Bebe-Aibat and Ramany, where it will be necessary to sink new wells, the production of crude will be bound to increase.

The figures published by the Statistical Bureau of the Baku Petroleum Association confirm the above conclusions. Thus, the average daily production of a well at Balakhany in the first two months of the year was 326 and 301 poods, and in March and April it was 306 and 322 poods, which means that there has been no decline. At Saboontchi there has even been a slight increase; at the beginning of the year the average daily output per well there was 885-846, and in March and April 883-909 poods. At Ramany and Bebe-Aibat, on the other hand, the average daily output has declined; at Ramany it was at the beginning of the year 1,798-1,849, and in March and April 1,486-1,316; whilst at Bebe-Aibat it was 2,108-1,836, and in April 1,805 poods.

The amount of work done in drilling new wells and deepening old ones clearly shews the direction which activity at the oil fields has taken. Thus at all the fields there was drilled:—In January, 27,635 feet; February, 30,254 feet; March, 40,908 feet; and April, 38,129 feet. This shews that boring activity at the oil fields is in full swing. Here also we see clearly the dividing line between the older and the more recently developed fields. At Balakhany the amount of drilling done was:—In January, 3,437 feet; February, 4,032 feet; March, 6,762 feet; and April, 7,399 feet. At Saboontchi also there was drilled in February 12,607 feet, and in March 17,857 feet. On the other hand, at Ramany there were no such jumps in drilling activity, which proceeds in a quiet and normal course. The reason is that in these fields the number of wells is much smaller, and abandoned wells are comparatively few.

The total production of crude oil during the first half of 1907 has amounted to 235,200,000 poods. The monthly figures are so uniform that 40,000,000 poods may be taken as the normal monthly output, which work out at the rate of 480,000,000 poods per annum. Only outside causes can bring about a reduction of this figure, whilst if the latter part of the year will be free from disturbing factors, there may even be an increase on that figure. In 1905 the total output was 410,000,000 poods, and last year it was 447,800,000 poods. These figures shew that the production is increasing, and the oil fields are recovering from the disasters of the autumn of 1905. But compared to the results of the years prior to 1905 there is still a great falling off. The record figure was reached in 1901 with 671,200,000 poods; in 1902 there was a slight decline to 636,500,000 poods; whilst in 1905, owing to strikes at the oil fields, there was a further decline to 596,600,000 poods. In the following year 1903, the production recovered, and went up to 611,600,000 poods. The price of crude oil has kept in close connection with the production. The average price of crude oil in 1901 was 8 copecs per pood; in 1902, 6.72 copecs, the result of the accumulation of enormous stocks. In 1903, the average price was 19.93 copecs; 1904, 14.67 copecs; and 1905, 19.93 copecs. In 1905, after the catastrophe, the price of crude rushed up to 36 copecs. Last year the average price of crude was 25.56 copecs. This year the price has been steadily rising, until it has now exceeded 30 copecs, which is an exceptional event in the history of the Baku petroleum industry.

PETROLEUM IMPORTS INTO GERMANY DURING THE FIRST HALF OF 1907.

The imports of various petroleum products into Germany during the first half of 1907, according to official statistics which have just come to hand, have been as follows:—

	Tons.
Illuminating Oils	481,983
Lubricating Oils	110,868
Crude Benzine	55,730
Refined Benzine	3,467
Gas Oil	4,452
Residuals	399
Crude Oil	10,786
Turpentine Substitutes and Other Mixtures ..	520
Total	668,205

These imports were distributed among the various producing countries as under:—

United States	459,408
Russia	86,791
Austria-Hungary	56,189
Dutch-India	38,137
Roumania	20,122
Other Countries, or origin not stated ..	7,558
Total	668,205

THE PRODUCTION OF MOEARA ENIM COMPANY.

The production of crude oil by the Moeara Enim Co., of Sumatra, during the first half of 1907 has amounted to 76,100 tons.

HOMELIGHT OIL COMPANY'S STAFF OUTING.

The London staff of the Homelight Oil Co., Ltd., enjoyed a most delightful day upon the upper reaches of the Thames on Saturday week, the occasion being the annual outing. The arrangements had been in the hands of a committee of which Mr. Thos. Williams was the hon. secretary, and so thoroughly were the arduous duties appertaining thereto discharged that everyone had nothing but praise for the efforts put forward to secure the comfort of all.

A start was made from Paddington Station shortly after nine o'clock for Windsor, where at Eton Bridge a launch was waiting to convey the party—and they numbered nearly 60—to Maidenhead.

Arriving at this picturesque spot early in the afternoon, the company sat down to dinner at the New Thames Hotel. The general manager of the company—Mr. J. B. McClurg—took the chair, the vice-chairs being occupied by Messrs. C. E. Stroud and J. C. Goodall. The healths of Mr. A. Goukassoff and Mr. McClurg were drunk, but of the ordinary toast list speeches there were none.

Leaving the hotel after all had done good justice to the mid-day meal, the company again boarded the "Royal Thames," this time on the return trip to Windsor. It was a delightfully fine day, and the river with its ever changing views of woodland and meadow, looked at its best. Messrs. Threader and Jackson presided at the piano and rendered some exceedingly pretty music, while Mr. Hardy gave a number of flute and piccolo solos.

Windsor was reached all too soon, tea being served at the Star and Garter Hotel. Here Mr. Goodall took the chair, and a number of toasts were heartily drunk, that of the health of the "General Manager" being proposed by Dr. Dvorkovitz, and enthusiastically honoured. The "Branch Managers" was also another well-received toast, this being proposed by Mr. Williams, and responded to by Mr. Watson (Manchester) and Mr. Bates (Cardiff).

At half-past seven a start was made for London, which was reached just as dusk had set in, everyone voting the day one of the most pleasurable that could be desired.

A SATISFACTORY FEATURE IN CALIFORNIA.

What is probably the most interesting feature of the present California oil situation is the prices now being made for oil in the Santa Maria, Coalinga and Midway fields. Heretofore, contracts and circumstances have held prices well down, and until within a few months ago there was no avenue of relief open to the independent producers. Now the conditions are changed. Expiration of contracts, completion of several new pipe lines, and an enormous and persistent demand have made possible the making of favourable contracts, the more important of which have been mentioned, and which include a contract for the delivery in the next five years of 10,000,000 barrels by the Western Union to the companies owned by the Standard Oil Co., at 50 cents a barrel.

THE MOTOR FUEL PROBLEM.

DR. DVORKOVITZ CRITICISES THE REPORT OF THE MOTOR UNION FUELS COMMITTEE.

During the past week, the daily press as well as the motor papers have given publicity to a letter from Dr. Paul Dvorkovitz dealing with the recently-issued report of the Fuels Committee of the Motor Union. In view of the importance which now attaches to the petrol question owing to the contentions put forward by many persons of a coming dearth in the supply of the article, we publish the letter *in extenso*. It is as under:—

"Sir,—As one of the witnesses who gave evidence recently before the Fuels Committee of the Motor Union with reference to the question of the supply of petrol, I would ask your indulgence while I make one or two explanations which are necessary in view of the publication of the recommendations of the Fuels Committee.

"The subject has naturally received careful consideration from myself, as being so closely associated with the petroleum industry, and it may be recollected that at two sittings of the Committee I put forward evidence which has led the Committee to frame two of their recommendations. In the Committee's report just published, I note with considerable surprise that they state the optimistic views which I hold as to there being no possibility of a shortage of crude oil for many years to come are not supported by the information they have obtained.

"It is very regrettable that the Committee have not seen their way to divulge this information, which apparently is contradictory to mine on this point, but, as having devoted considerable time to this subject of oil production, I am confident that my contentions cannot be refuted by facts. I have again and again made it clear that if the motorist will only go in for generally adopting a spirit of heavier gravity, then a dearth of supply is removed from the bounds of possibility, while at the same time a reduction in the price of the article is tolerably certain.

"Upon this matter, as upon others, to which I will refer later, it appears to me that the Committee have been 'totally at sea.' By way of corroborating the statements I made before the Committee, I need only say that once this heavier grade of motor spirit is recognised as suitable for all cars, our markets are at once open to a class of benzine which has hitherto been shut out. Roumanian spirit, for instance, could be supplied in almost limitless quantities, and the present production of oil in that country would allow of a quantity being exported sufficient to meet all European demands. To-day, Roumania alone is capable of supplying no less than 90,000,000 gallons of this motor spirit.

"I simply mention this to shew that when the Committee say that my optimistic views cannot be supported, they totally ignore all facts which corroborate my statements.

"I am very pleased to note that this heavier spirit is now being accepted by many motorists, and consequently there is every reason to hope that this in itself will permanently solve the motor fuel problem. As to price, there is no doubt that when this heavier spirit comes more into general use, prices will decline, and as evidence of this, we see that during the past few days petrol has dropped one penny per gallon throughout the land.

"I now come to briefly deal with that portion of the Committee's report which deals with the alternative fuels to petrol. It is not for me to say whether the Committee have been biassed in favour of finding, at any cost, some substitute for petrol, but many of their recommendations not only shew a remarkably optimistic view in favour of alternative fuels, but are nothing more nor less than absurd and impracticable propositions.

"'Alcohol,' say the Committee, 'is the one of all the liquid fuels considered that holds out the greatest promise.' But the Committee abstain giving any reasons which have led them to come to this conclusion. Personally, I totally fail to see how alcohol can ever stand the slightest chance of competing with petrol in

this country, for, after all, the question must of necessity narrow itself down to that of £ s. d., and, as the Committee put it, 'the best way of ensuring that the price of petrol shall not become excessive, is to have available a fuel that can compete with it, and that can be produced at a moderate price in unlimited quantities.' Now, according to the Committee's own argument, the calorific value of methyl alcohol is 11,300 B.T.U., and that of petrol 20,300 B.T.U. This being so, the value of alcohol to the motorist is about one-half that of petrol, and not, as the Committee say, two-thirds. Upon that question—that important question of the cost of alcohol—the Committee are judiciously very silent, and although they come to the conclusion that it can be produced at a moderate price, we are all left to guess what that price would be, or how it is arrived at. Seeing that as the calorific value of alcohol is about half that of petrol, it stands to reason that the cost to the consumer must be 50 per cent. less for volume. Going upon volume also, we know that in the oil trade with the most perfect organisation for distribution, the necessary expenditure after petrol has reached this country is about 2d. per gallon before it reaches the consumer, and, inasmuch as, seeing that double the quantity of alcohol would be required as compared with petrol, volume for volume, it is very easy to see that so far as competing in price with petrol, alcohol can never hope to make any headway in this country.

"As I say, in the face of these facts, one cannot reconcile the conclusions of the Fuels Committee, or see why in their first recommendation they are so optimistic regarding alcohol.

"The Committee also looks upon benzol as solving the fuel problem, and urge that the notice of the members of the Motor Union should be directed to its use, as, apart from benzol being a home production, it can be used with complete success in the present type of engine. Then they go on to make the following remarkable statement:—

"'There are firms in this country who are willing, should there be a largely increased demand for benzol, to erect benzol recovery plants in connection with coke ovens and similar appliances for the treatment of coal; the erection of such plants would mean within twelve months an increase of benzol produced in this country of approximately five million gallons per annum, which is equal to doubling the present supply.'

"I will take the figures of the Fuels Committee for defeating their own argument. Approximately, the present production of benzol in this country is 2,500,000 gallons per annum, and for years past this has been the quantity that has been sold in this country for the making of aniline dyes. Now is it reasonable to assume that there is not being more benzole recovered, because it cannot find a ready market? It is true that the quantity could be increased by the erection of special and expensive washing plant; but to what extent? As I have previously pointed out, the maximum quantity of benzol that can be recovered is about 2 lbs. per ton of coal, and surely no sane company would ever dream of laying down special plant for the purpose of recovering about 2d. worth of benzol for every ton of coal treated? This is the reason why it is foolish to look to benzol as a substitute for petrol, and the fact that the Fuels Committee are very optimistic about the subject does not bring it one iota nearer realisation.

"There may yet be time for a supplementary report to be issued by the Committee giving reasons which have led them to put forward such strange recommendations as the substitution of petrol by alcohol or benzol. It certainly would be perused very carefully by those who have studied this interesting question for years, but by no one would it receive more consideration than by

"P. DVORKOVITZ."

An Improved Method of Mounting Museum Specimens.

By C. W. ROWNTREE, M.B., B.S., F.R.C.S.

Methods of mounting and preserving museum specimens in their natural colours have long been the subject of investigation by pathologists, notably Jores and Kaiserling, and by their methods or modifications of them it has now become a comparatively easy and certain matter to fix tissues and organs in such a way that the appearances present during life can be accurately preserved.

It is a more difficult matter, however, to ensure the permanence of these preparations, for the mounting fluid most generally used - glycerine and water - has among other drawbacks the disadvantage of allowing the growth of moulds, for the prevention of which the addition of formalin or other antiseptic is necessary. It is this which is probably responsible for the gradual bleaching of the specimen that so often occurs. Other solutions that have been suggested have the common drawback of either undergoing changes themselves or exerting a solvent action on the pigments of the specimen.

The ideal mounting medium in addition to being colourless and transparent, should have no action of any kind on the specimen, and should itself not be liable to chemical or putrefactive change. In searching for some substance which might be expected to fulfil these requirements, liquid paraffin (Paraffin. Liq. B.P.) suggested itself.

Liquid paraffin has many obvious advantages; it is colourless, perfectly transparent, absolutely non-volatile at all ordinary temperatures, and has a low freezing point. Chemically speaking, it appears to be almost entirely inert, the only substances upon which it has any solvent action being a few organic compounds of its own class, such as benzine, xylol, etc.; it is obvious, therefore, that changes due to any chemical action on the specimen mounted in this medium are not to be anticipated. While it possesses no antiseptic properties, yet organisms are unable to grow in it, so that the disadvantage of having to add an antiseptic to prevent the growth of moulds is done away with. (One of the uses to which liquid paraffin has been put in this laboratory is as a protective layer over the gelatine or agar in the preparation of anaerobic culture tubes.)

And, lastly, a very great advantage of liquid paraffin is that its index of refraction is almost identical with that of the glass of which museum jars are manufactured; this combined with its transparency gives to specimens mounted in this medium a peculiar sharpness of outline and brilliance of colour contrasts, while there is the additional advantage that excellent photographs of the specimens can be obtained without removing them from the bottle.

In attempting to make use of this substance as a mounting medium one has to overcome the difficulty that liquid paraffin is not miscible with any of the solutions used in the preparation of this variety of specimens, and one rather anticipated that an emulsion would result from the admixture of liquid paraffin and glycerine and water, for instance. However, it was found that even

if such a mixture were vigorously shaken, the resulting emulsion rapidly separated into two well-defined layers without turbidity or other change in either fluid.

It seemed possible, therefore, that if a specimen were taken straight from one of these watery fluids into paraffin, the latter might be expected to replace the water without damaging the appearance of the specimen. This was actually found to take place when a specimen was taken from watery glycerine to paraffin, the glycerine separating out in the course of 24 hours, and dropping to the bottom of the jar, where it formed a well-defined layer from which the paraffin was readily decanted.

The exact technique which I have found to give the best results is as follows:—

The organ or tissue to be preserved, as soon as possible after removal in the operating theatre or post-mortem room is placed in the following solution:—

Sodium Sulphate ..	grms. 20	Formalin ..	ccs. 50
Sodium Chloride ..	grms. 10	Water ..	to 1,000 ccs.
Magnesium Sulphate	grms. 20		

It is desirable that the specimen should not be washed or compressed prior to its immersion, in order to preserve as far as possible the blood upon the presence of which so much of the ultimate appearance of the specimen depends. Any blood, etc., adhering to the outside of the specimen and spoiling its appearance can be removed readily, and with less damage later on when it is coagulated.

As in all methods in which formalin is used, the period for which the specimen should be left in the first solution depends upon its size; for anything up to the size of the kidney, 48 hours will be sufficient to harden and fix it throughout. Larger specimens should be left in a correspondingly longer time, but it is well to make it as short as possible, as the longer the specimen is in the formalin solution the more difficult is it to get the colour back again.

When it is judged that the specimen is thoroughly fixed, it is transferred to a 50 per cent. solution of methylated spirit, which must be free from naphtha. This continues the hardening, and washes out the formalin and salts, which occasionally, when not thoroughly removed, crystallise out on the surface of the specimen.

After remaining in this solution for from 12 to 24 hours, the specimen is transferred to pure naphtha free methylated spirit, in which the original colours of the specimen will return.

In about four to six hours the best result will have been attained, and the specimen is then placed in the following solution, in which it may remain without harm for several days:—

Sodium acetate ..	grms. 20	Water ..	ccs. 500
Glycerine ..	ccs. 500		

The specimen at first floats in this solution owing to the spirit with which it is impregnated, and in order to ensure complete immersion, it is necessary to weight it for the first few hours until all the spirit has been displaced. From this last solution the specimen in the course of two or three days is placed in pure glycerine, where it remains for a similar period, when it is ready for permanent mounting in paraffin.

THE APPLICATION OF KERMODE'S LIQUID FUEL SYSTEM TO BABCOCK AND WILCOX BOILERS.

We are indebted to a recent issue of *Engineering* for a description of the application of Kermode's liquid fuel system to Babcock and Wilcox boilers. The boiler in which the system has been installed has been most successfully at work for over twelve months at the Toulas Brass Rolling and Cartridge Works in St. Petersburg. We gather that the installation was established subject to very severe conditions, a guarantee having to be given that the plant would have an efficiency of 78 per cent. of the theoretical thermal value of the fuel used, which value was placed at 19,400 B.T.U. per pound of fuel. It was found that this could easily be done with an air pressure of only 0.7 lb. per square inch, and this result, we understand, has been very satisfactory. In explaining the accompanying sketch (No. 1) we would say that the oil pipes are represented by C; the oil-main at D and E; the air-mains at G, from which the branch-pipes A go to the burners; and the air-compressor at M, from which the air passes along the pipe L to the heater K. An air by-pass valve is shewn at N, and air-pipes O, O, which lead to the flue and discharge the surplus air when required. A pressure-gauge P is shewn on the air-main. F is the oil-supply tank. The boilers here shewn were originally fitted with burners of Russian manufacture, and when these were removed the guarantee given by the Kermode Co. was that the new burners should have at least 10 per cent. better efficiency than the old ones. The results have quite come up to expectation, for the evaporation from and at 212° F. has proved to be 15.91 lb. of water per pound of fuel, although the oil was not of a very high calorific value.

The actual construction of the burner is shewn in Fig. 2, which is a section taken along the axis. The oil enters at the branch A, after which its flow is regulated by the conical valve shewn. The air, after being heated, enters the branches B and C; the air entering through C meets the oil as it passes the oil-control valve, which is operated by the wheel E, and the oil and air travel on together; the former is rapidly

vapourised in its passage. In order to assist this process there is a helix K placed in the central tube, which effects a complete admixture of the air and vapour. The supply of air can be regulated at two points by means of the wheels, pinions, and racks. One of these pinions marked L, moves the internal tube over the oil-delivering nozzle F, and so regulates the air which enters there. The second pinion M operates the outer tube, and varies the amount of air escaping round the mixed jet at the end of the twisted spindle K.

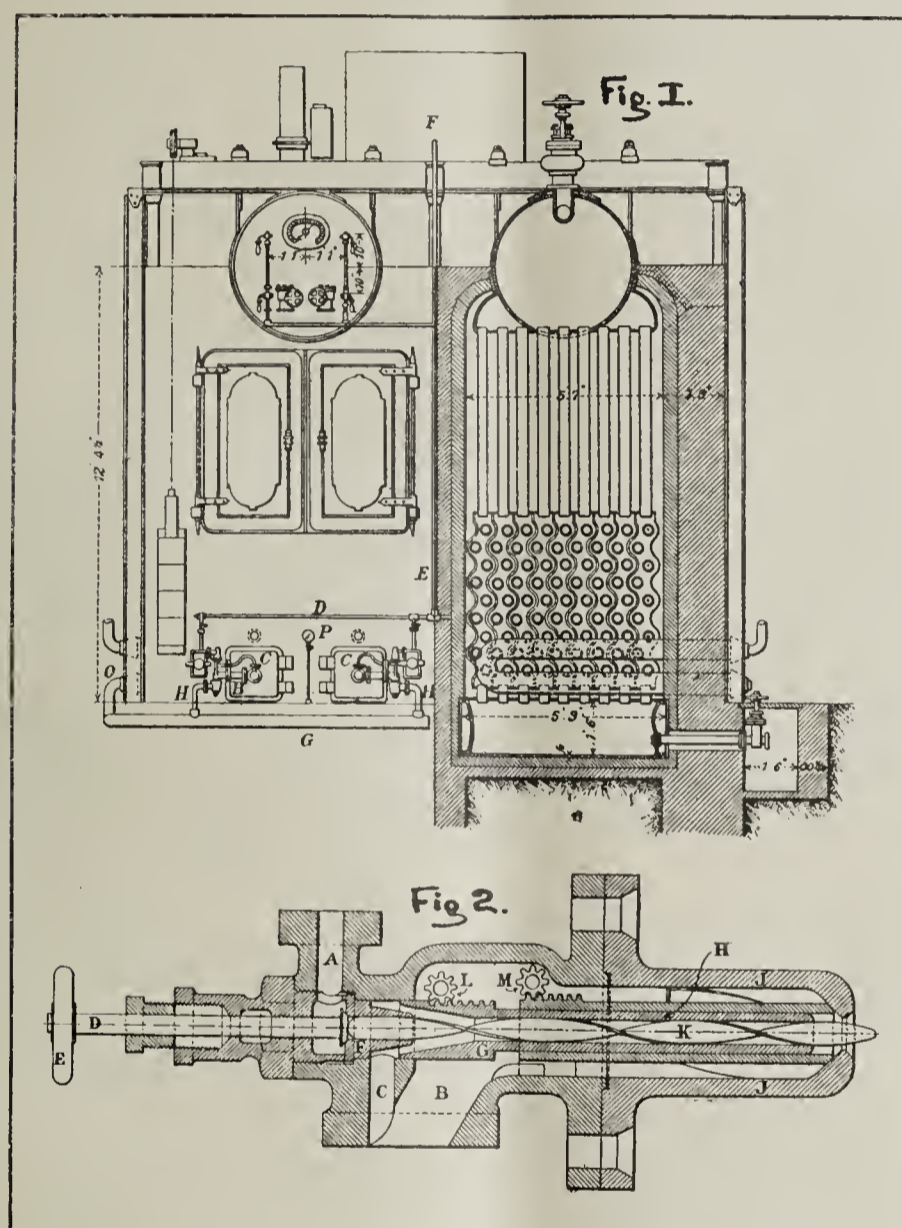
By this arrangement the elements of combustion are

under complete control, and the vapourisation is very complete, for the oil trickling from the nozzle is carried forward by the current of air that surrounds the nozzle. At the point where combustion is about to commence a further supply of compressed air is given, and a third supply is added by the draught which comes through the fire-bars, and in special cases through a hollow furnace front, and passes between the inner and outer plate, and escapes through a coned opening round the burner.

No change is necessary in the arrangement of the furnace as designed for the use of coal, all that is necessary being to cover up the fire-bars with broken fire-bricks to a depth of from 6 in. to 8

in. The burners are usually made to hinge, so that they may be easily turned back when it is necessary to examine the nozzles. The act of withdrawing the burners shuts off the supply of oil and air, and so prevents accidents. The burner is started by turning the pinion L until the inner tube is in the position shewn in the illustration.

The air compressor is then started, and air is blown slowly through the furnace, so as to ensure that no explosive gases are present. The burner is then swung back until the furnace door can be opened. A piece of oily cotton waste is then placed inside the furnace and lighted. The burner being in position, the oil is turned on, and the tube marked G is opened by turning the pinion L, and the air-pumps are allowed to work slowly until the fuel is alight.



THE PETROLEUM FIELDS OF ALASKA.

A VALUABLE REPORT.

(Concluded from page 48.)

Conditions will improve in this respect with better facilities for communication and transportation, and can also be bettered if machine shops and supply depôts are established, as they will be if the presence of productive oil territory is shewn.

Inexperience with Local Conditions.—The difficulties caused by the lack of experience of the drillers with the rocks of the local section have already been alluded to under various headings. They may be summarised as including failure to drill slowly or dress the tools so as to avoid deflecting the drill on hard, steeply inclined surfaces; failure to note the crookedness of the hole and remedy it promptly; ignorance of local caving strata and consequent failure to case in time to prevent cavings, and failure to obtain proper and adequate outfit and supplies.

Cost of Labour and Transportation.

The cost of drilling has been very largely increased over what it would be in more favoured and better established oil fields by the high cost of labour and of transportation of men and freight. Not only are the drillers paid higher wages than they would receive at most localities, but the unskilled labour receives excessive pay. It is highly probable that when conditions become more settled and work is done on a larger and more permanent scale wage conditions will become more normal and transportation charges will be reduced.

Shipment and Markets.

If petroleum is produced in commercial quantities at Controller Bay a new set of problems concerning its disposal will arise. All the petroleum of the region, as far as is now known, is a refining oil of high grade, for which there is a good demand on the Pacific coast. The content of extremely volatile constituents, such as gasolene, is so great that it is questionable whether the oil can be safely shipped in bulk without some refining. There are plenty of good sites for refineries at no great distance from the wells. If a harbour in the vicinity of Katalla or elsewhere on Controller Bay is utilised it will be a very simple matter to transport the oil from the wells to the wharves by short pipe lines on a practically level grade. If no harbour in the immediate vicinity can be used it will be necessary to ship from Orca Bay or elsewhere on Prince William Sound, a distance of about eighty miles westward and across Copper River. The grades to Orca are almost nothing, and there will be no difficulties except in crossing Copper River. The distances from Katalla and from Orca to Seattle by the steamer route, "outside way," are about 1,250 and 1,350 statute miles, respectively.

Conclusions.

The geographic conditions are such as to cause heavy initial expense of prospecting and drilling, but admit of

permanent improvements which will make these conditions much better without great engineering difficulties or excessive cost.

The geology is complex and difficult to interpret and does not shew definitely the relation of the occurrence of the petroleum to the stratigraphy and structure. The known facts of the local geology are unfavorable to the presence of productive bodies of oil, and indicate that if oil is found in quantity the distribution of the productive areas will be very irregular and difficult to locate.

The surface oil shewings (seepages), though widespread and copious, are not conclusive evidence of the occurrence of productive oil pools. They are apparently more promising than any other known facts in regard to the region would indicate. The only safe conclusion to be drawn from them is that they indicate the possibility of productive oil areas in the vicinity.

Operators and investors who may not be familiar with local conditions will do well to be governed by the following suggestions:—

1. —They should be certain that legal title can be obtained to a sufficient area to make it possible to sink many test wells under widely different conditions, and to expect a large enough probable production to pay for heavy initial expenditures and large permanent improvements.

- 2.—They should have large enough capital to be able (a) to purchase in quantity and at low rates; (b) to build good roads and other improvements and thus reduce the cost of operating; (c) to carry a large stock of tools and supplies in order to avoid costly delays in drilling and to be able to drill deep; (d) to procure the best professional advice and good drillers; (e) to drill many test wells without hope of immediate profit; (f) to market the product in face of existing conditions in the petroleum industry, and (g) to afford to lose the investment.

3. The first wells should be located on the strike and at no great distance from producing wells, or down the dip from a good seepage and at such varying distances that the rocks outcropping at the seepage will be encountered at depths ranging from a few hundred feet, the limit (in depth) of drilling.

4. Subsequent wells should be determined in position by the location of existing wells and by the structure. They should be along the strike and close to productive wells, and either not along the strike and at a short distance or on the strike and at a considerable distance from non-productive wells.

5. Drillers and tool dressers should be obtained from regions where there is difficulty in keeping the holes straight.

6. If oil is obtained it will probably be down the dip rather than up the dip from a seepage, in shallow wells near a seepage, or in deeper wells farther from a seepage.

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By SIR BOVERTON REDWOOD, D.Sc., F.R.S.

Hon. Mem. Am. Phil. Soc.; Hon. Mem. Imp. Russ. Tech. Soc.; Adviser on Petroleum to the Admiralty and Home Office; Consulting Adviser to the Corporation of London under the Petroleum Acts; Adviser on Petroleum Transport to the Thames Conservancy.

CONTENTS.—Section I.: Historical Account of the Industry.—Section II.: Geological and Geographical Distribution of Petroleum and Natural Gas.—Section III.: Chemical and Physical Properties.—Section IV.: Origin.—Section V.: The Production of Petroleum, Natural Gas and Ozokerite.—Section VI.: Refining.—Section VII.: The Shale Oil and Allied Industries.—Section VIII.: Transport, Storage and Distribution.—Section IX.: The Testing of Crude Petroleum, Petroleum and Shale Oil Products, Ozokerite and Asphalt.—Section X.: Uses of Petroleum and its Products.—Section XI.: Statutory, Municipal and other Regulations relating to the Testing, Storage and Transport.—Appendices.—Bibliography.—Index.

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THE WORLD'S PRODUCTION OF PETROLEUM IN 1906.

NOW that petroleum and its bye products play a far more important part in our international commerce than has ever been the case previously, it is well, in order to correctly judge of the accuracy or otherwise of many contentions put forward as to the decline of oil-producing territories throughout the world, to study in one's calm moments what is to-day going on in the various fields, and to see if really we are progressing in the matter of oil production.

It is frequently urged that the prominent producing fields are failing in their supplies, and that ere long, the uses of petroleum will have to be minimised owing to the supply falling considerably short of the demand. Then, again, in regard to the question of the use of petrol, the same ideas are thrust upon us by many pessimists who, either wilfully or unknowingly, distort facts in a way which suit their ideas best. Let us here now say that the petroleum industry never before occupied the same important position as it does to-day; never were the uses of oil so multifarious as now; and, to our mind, never have these prophets of ill been so beside the mark as

when they contend that the industry associated with the production of oil is on the wane.

We must all admit that before an industry can permanently assume that degree of importance to which the petroleum industry has now arisen, many artificialities have to be overcome, and many abnormal periods have to be passed through. This, of course, is inevitable, yet it may to some form the basis for wrong conclusions.

Paradoxical as it may seem, during the year 1906, though the production of oil decreased, the petroleum producing industry made steady progress in all the world's producing countries—a progress which undoubtedly gives promise of being permanent because the foundations upon which the industry is being built are assuming, as time goes on, that solidity without which no branch of commerce can be lastingly successful. The petroleum industry is slowly putting its house in order, and progressing, even though for the time being a decrease in production has to be recorded. This decrease has proved sufficient to start the pens of the pessimists, yet in a strain which is totally contradicted by facts.

Look at the matter in what light you will, it must come as very gratifying to find that the production of oil during 1906 fell but little short of that for the previous year. It amounted to approximately 25,000,000 tons, and was thus almost a set-off against the world's production of 1903, though behind the figures for the past two years.

Before going into comparisons, or referring to the circumstances which have brought about the decrease for the past year, we will give the production of each country. Compared with the previous three years, the figures were as under, in tons:—

	1906.	1905.	1904.	1903.
America	14,000,000	17,000,000	15,000,000	12,557,000
Russia	7,000,000	6,500,000	10,600,000	10,320,000
Sumatra, Java and Borneo) ..	1,500,000	1,200,000	1,000,000	830,000
Galicia	760,000	800,000	827,000	713,000
Roumania	880,000	568,000	455,000	384,000
India	500,000	465,000	404,000	325,400
Other Countries..	390,000	350,000	250,000	250,000
	25,140,000	26,883,000	28,536,000	25,380,500

From these figures it will be seen that, when compared with those for 1905, an increase is recorded in each country with the exception of America, where the production has somewhat declined during the past twelve months. But a variety of events have led to this diminution, which has been brought about at the expressed desire of the producers themselves. In the Pennsylvanian and Texas fields, we know that production has been kept up to its high water mark, and the utmost activity has prevailed in the search for new territory. But the more prolific fields of America have been kept at a low point of production. In both California and the Mid-Continental fields, the oil yield became so great early in the year that the transportation question formed the most serious of difficulties, and so pressing did this become, owing to the phenomenal increase in production, that hundreds of wells were shut down to await transport facilities. This mainly applies to the Kansas and Indian Territory fields, and is the more surprising when one recollects that the greatest efforts have been put forward in the erection of storage and the laying of pipe line facilities.

The fact is that for a time, production increased so rapidly that it was absolutely impossible to find storage or transport facilities for it, and the inevitable result was that almost a general shut down in wells was brought about. Even to-day (now in the second half of 1907) large quantities of oil still await transport in Kansas and Indian Territory, and until the three trunk pipe lines are completed to the Gulf of Mexico, the problem of how to find an outlet for the product of these large areas will not be solved. Thus, while the production of oil in America declined during 1906, that decline was purposely brought about by the producers themselves, and was done in order to place the industry upon a more solid basis, and to provide the means whereby the re-occurrence of similar circumstances are out of all question.

Turning to Russia, it is very pleasing to note that the period of unrest is slowly giving way to that of confidence, and matters in the petroleum industry are gradually returning to their normal level. During 1906, a serious attempt was made to increase the production of oil from the Caucasus, and, in fact, an increase of about 500,000 tons was brought about, but, as may be imagined, after the disorders of 1905, the repair of the damaged properties and wells was a matter attended with great difficulties, and in regard to which, progress could only be very slow. That a further improvement will be brought about during the present year is tolerably certain, and an advance of 2,000,000 tons upon the figures of 1905 is confidently anticipated. The older fields of Balakhany and Saboontchi shew distinct signs of decline, but on the other hand, Ramany and Bebe-Aibat, with their wealth of virgin territory, are rapidly coming forward, so that, given peaceful conditions on the fields themselves, there is every reason to believe that Russia's oil production is capable of considerable increase, even to reach the figures of 1903.

The Dutch Indies still remain third on the list of producing countries, but year by year, their position is greatly strengthened, and during 1906 the total yield of oil from their territories was practically double what it was about four years ago. As our readers are aware, transport facilities have minimised progress during the past twelve months, but this difficulty now being overcome, remarkable expansion is bound to take place and the Far Eastern products satisfy a large portion of the demands, not only of the Orient, but of European countries. The recent amalgamation of interests here also is full of significance, and will doubtless tend to more remarkable developments in the Dutch Indies than those which have taken place in recent times past.

Of the other large producing countries, it only remains to say that Roumania, with its great wealth of oil, is marching steadily forward, and each passing year sees its petroleum industry occupy a more important position in regard to its commerce. During 1905 the production of oil was over 300,000 tons larger than in the preceding year, and there is every promise that this year an even greater advance will be recorded.

There is no necessity here to deal with the countries in which valuable petroliferous territories are now being opened up, but if this phase of the question were investigated, it would substantiate our contention that the petroleum industry is slowly but consistently advancing, in order that it may be in a position to flood the world with limitless quantities of petroleum products for the benefit and advantage of mankind.

NOTES FROM ALL QUARTERS.

RUSSIA.

A Good Idea.—The Caspian railways propose to establish a special committee for the purpose of joint buying of liquid fuel. The purchases will be made several times in the year, and in small quantities, so as to give small firms a chance to tender. The present system of making contracts once a year and for the whole quantity excludes the smaller firms entirely.

Petroleum at Samara.—The discovery of petroleum deposits in the province of Samara in the Volga district has been confirmed. A geologist is now investigating the extent of the oil field. The owner of the estate, Mr. Rylikoff, has had an offer from an important German firm to develop his property on terms advantageous to him. He, however, declined to conclude any agreement.

Real Progress at Last.—Messrs. G. M. Araffeloff and Co., petroleum producers of Baku, in 1906 earned a profit of 21,406 roubles on a total revenue of 51,619 roubles. The nominal capital is 1,000,000 roubles. The properties are valued at 966,409 roubles. The whole profit was applied towards writing off losses of former years, which now stand at 320,527 roubles.

The Caspian Pipe Line Company, owning a pipe line system running from the Balakhany-Saboontchi-Ramany oil fields to Baku, have in 1906, their ninth financial year, had a total revenue 639,890 roubles, and an expenditure of 306,654 roubles. The company's property is valued in the balance-sheet at 15,413 roubles. The nominal capital is 200,000 roubles. After writing off for various purposes there is left a net profit of 17,498 roubles, out of which a dividend of 5 per cent. has been declared.

The Uchta Concession.—With regard to the statement about the concession in the Uchta oil field, granted to Captain Voronoff, we now learn that he originally applied for a concession on 3,270 dessatines for exploitation, but was only granted 1,200 dessatines for prospecting for three years. During this period he has to drill 7,000 feet, including two boreholes of 1,400 feet each. If successful, Captain Voronoff will get for exploitation $\frac{4}{15}$ of the area of each plot proved by him. Captain Voronoff will have the privilege of paying only half of the ordinary excise duty on all illuminating and lubricating oil obtained from crude oil produced at Uchta during the first ten years. This privilege will cease when the total output of such products has during the above-mentioned period reached 10,000,000 poods.

AMERICA.

Bound for India.—The British tanker "Seminole," chartered by the Standard Oil Co., recently cleared San Francisco with 2,200,000 gallons of kerosene for Madras and Calcutta. The cargo was valued at \$100,000.

The Gulf Co.'s New Tanker.—The Gulf Co.'s new tanker is to be named the "Oklahoma," and will be one of the largest vessels yet built for the oil-carrying trade, and about 1,800 tons larger than any oil boat turned out of American yards. Her oil cargo capacity will be 2,520,000 gallons.

Storage on the Panama Canal Zone.—The Federal Government is installing tanks in the canal zone for the storage of crude oil to be used in the construction work on the canal. The oil will be supplied by the Union Oil Co., of California, from their Panama pipe line. The requirements of the Government amount to about 1,000,000 barrels annually.

Activity in Santa Maria.—It is reported that the Western Union Oil Co. has sold its oil for the next four years to the extent of 10,000,000 barrels to the Associated, Standard, and Graciosa Oil Companies. Most of the producing wells in the Santa Maria field are now being pumped, and it is estimated that at least 35,000 barrels daily are moving to Tidewater.

Union Oil Company's Success.—It is reported that the Union Oil Co., of California, has encountered a very good producing well in their new Brea Canyon property. The well is said to be yielding one thousand barrels daily. In the locality in which this latest well has been brought in, the company has 6,000 acres upon which four drilling rigs are now at work.

The Gulf Co.'s Pipe Line.—The Gulf Co.'s pipe line to Texas is rapidly being laid, and now of the 148 miles of pipe between Tulsa and Red River no less than 120 are already completed, while of the 450 miles from Tulsa to Sour Lake 250 miles are almost ready to receive oil. The company now has 1,150,000 barrels of Glenn pool crude stored ready for shipment to the refineries.

Extending Spindle Top.—Spindle Top does not appear to be dead yet. The J. M. Guffey Petroleum Co. has brought in a well which is producing 600 barrels per day. The well is in that part of the famous field in which developments have been going on for some time past, and in which some of the best producers of the field have been located. The new wells widens the proven territory to some extent.

Ontario Production.—The Canadian *Oil and Gas Journal* points out that during June, the official production of oil in the Tilbury East oil field was 35,654 barrels, while that of Romney was 3,163 barrels. The Glenwood district followed with 1,100 barrels, there only so far being one oil well in the latter-mentioned district. The total production is slightly under that of the preceding month.

The Glenn Pool.—The estimates of the daily production in the Glenn Pool most conservatively place it now at 100,000 barrels, which means that during the past two months there has practically been no change in the producing situation. At the end of June there were 572 wells producing oil in the Glenn field, while 197 were drilling, so that by this time there should be no less than 760 producing wells in that prolific district. The storage facilities are being increased as rapidly as possible.

ROUMANIA.

Prolific Bustenari.—The Columbia Co. has struck a very prolific well at Bustenari.

The Campina Storm.—The damages done by the storm at Campina have been nearly all made good.

Tzintea continues to be the centre of speculation in petroliferous lands, in the same way as Baicoi was last year.

Fire at Campina.—An outbreak of fire has caused considerable damage at the sulphuric acid works which the Steaua Romana is erecting at Campina.

The Romano-American Co. has applied to the Communal Council of Braila for the lease of a plot of land for the purpose of erecting oil-canning installations.

Too Prolific.—On Tuesday, July 23rd, well No. 102 of the Steaua Romana began to spout with such violence that the whole town of Campina shook as if by an earthquake. The gases took fire almost immediately, and the derrick and plant were completely destroyed.

Fire at Bustenari.—During last week a serious fire broke out at Bustenari, which started at well No. 11 of the Bustenari Co., and spread to No. 1 of Mr. Poenaru, No. 5 of Gallo-Romana Co., and hand well No. 62 of the International Co. The derrick and plant were completely destroyed, including three benzine motors.

The Raky Boring Company is in negotiation with the Trajan Co. with a view to undertake the drilling of the wells which the latter company propose to sink on their concessions at Poiana, near Campina. The Raky Co. has abandoned the well which they have been drilling at Gura-Ocnitză, after reaching a depth of 400 metres.

An Eye to Export.—The Roumanian Government are now considering the question of making further extensions in their petroleum export storage installation at Constantza. The existing 16 large tanks, together with the five additional tanks already agreed upon, are considered quite insufficient to satisfy the constantly growing needs of the petroleum export trade.

The Steaua Romana has settled in an amicable manner the land dispute which they had at Baicoi with Mr. Sfetescu. Mr. Sfetescu has renewed the lease of his land to the Steaua Romana for three years, and sold to them half of his royalty, which is 12 per cent., in return for an annual rental of 60,000 francs. The company will now start several boreholes on the property.

PETROLEUM STORAGE REGULATIONS IN TURKEY.

The Turkish Government has published the following regulations for the storage of petroleum in Turkey:—

For the storage of inflammable goods, such as illuminating oil and benzine, the communes have to establish depôts outside the towns or of the market. Merchants and sellers will not be allowed to keep in their stores a larger quantity than is strictly necessary. For each petroleum receptacle installed in the public depôt the merchants will have to pay 2 piastres for the first month and 5 paras per month for subsequent months. The owners of private storage depôts established before the coming into force of these regulations, and having as their object the storage of their own goods, may continue to use the same also in the future, but on the condition that they shall store in them their own goods only.

The conditions of leasing remain the same as were in force for depôts established by special concessions. Merchants will be at liberty to establish their own private depôts for storing their own products only. The selection of the site and manner of building the depôt must receive the approval of the authorities. The depôts will be subject to the control of the communal authorities. All losses which may occur of oil or other product, either in storage or in transport and caused by the negligence of officials of the storage depôts, will be charged to the communes. The communes will also undertake the risks of damage or destruction by fire. The owners of the goods will have the right themselves to insure the goods and deduct the premium from the storage charges.

YOKOHAMA PETROLEUM IMPORTS.

During the month of May there were 46,010 gallons of petroleum imported into Yokohama, to a value of 9,720 yen, as against an import of 280,000 gallons for the corresponding period of 1906, these being valued at 79,800 yen. The total quantities imported during the five months of this year amounted to 6,232,906 gallons, and were valued at 1,251,195 yen.

ANOTHER PIPE LINE TO THE GULF OF MEXICO.

The announcement is made by one of the *Houston Post's* special correspondents in Tulsa, Indian Territory, that the Standard Oil Co. and the Security Oil Co., of Texas, will together build a third pipe line from Tulsa to the Mexican Gulf. The total distance of the trunk line will be about 450 miles. The Standard Co., it is further stated, will build south to the Texas line, and from there the Security Oil Co. will build to Chaison, Texas, which will be the terminal point at the Gulf. The necessary right-of-way for the new line through Indian Territory has already been secured, so it is probable that the actual construction of the line will be commenced forthwith.

THE PETROLEUM INDUSTRY IN JAPAN.

The Hoden Petroleum Co. of Japan, operating in the province of Hinrama, which is one of the largest Japanese petroleum companies, is increasing its capital by 1,000,000 yen, with the object of starting development of petroliferous deposits in the province of Totomi and in Formosa. There is to be noted lately in Japan a great increase in the demand for liquid fuel.

ANOTHER PETCHORA OIL FIELD.

The Perm Exchange Committee has received a communication from the Society of Mining Engineers of the Ural, announcing that a member of the society, whose name is not disclosed, has discovered a deposit of petroleum in the Petchora region in a locality which is less than 60 miles from the Kama watershed, and thus possessing a great advantage over the Uchta oil field. The society, who have undertaken to act on behalf of the actual discoverer of the oil field, propose to the Exchange Committee to undertake the exploration and exploitation of this new oil field, or recommend it to capitalists. The place of the oil field will be indicated in return for an undertaking to pay a small royalty on the production.

This discovery, if confirmed, is of great importance as it would solve the fuel difficulty on the Kama and Upper Volga.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO JULY 29th, 1907.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since July 15.	From Jan. 1.	Since July 15.	From Jan. 1.	Since July 15.	From Jan. 1.	Since July 15.	From Jan. 1.	Since July 15.	From Jan. 1.	Since July 15.	From Jan. 1.	Since July 15.	From Jan. 1.	Since July 15.	From Jan. 1.
Austria ...	—	—	—	67,440	—	67,770	—	—	—	—	—	—	—	—	—	135,210
Belgium ...	—	153,410	30,920	373,545	—	—	—	310	—	4,000	—	—	—	590	30,920	531,855
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	—	—	—	—	—	—	—	1,726,500	13,125,760	—	—	—	—	1,726,500	13,125,760
Germany ...	6,190	1,170,585	54,880	898,970	—	2,000	—	—	—	80	—	—	—	3,500	61,070	2,075,135
Holland ...	50	1,070	520	10,470	—	—	—	—	36,360	377,760	—	—	2,700	87,930	39,630	477,230
Roumania ...	—	5,744,090	—	—	—	—	—	3,370,390	—	1,459,000	—	238,700	—	—	—	11,172,180
Russia ...	5,170	22,540,970	10,250	2,912,370	—	—	—	—	—	9,750	—	—	10,660	1,415,110	626,080	26,878,200
U.S.A. ...	5,671,950	57,370,050	2,742,670	22,646,475	—	579,710	784,320	27,643,330	—	3,470,560	—	4,112,470	37,240	911,410	9,236,180	116,734,005
Other Countries	—	950	19,580	49,155	—	—	—	—	—	2,500	—	40	23,000	29,590	42,580	82,235
	5,683,360	86,981,125	2,858,820	26,958,425	—	649,480	784,320	31,374,030	1,762,860	18,449,410	—	4,351,210	673,600	2,448,130	11,762,960	171,211,810

THE PETROLEUM FIELDS OF SANTA BARBARA.

ANOTHER GOVERNMENT SURVEY.

(Continued from page 46.)

Pinal-Fox-Hobbs Area.

The area comprising the Fox lease, the south-western part of the Hobbs lease, and the north-eastern portion of the Pinal property, occupies the ridge and two adjacent canyons which extend northward from the central portion of Graciosa Ridge. The wells are located in an area of considerable structural disturbance caused by the development of two local anticlines on the north-western flank of the main Mount Solomon anticline. These two minor flexures have been named after the companies under whose property they are best developed.

The first oil zone (A) is penetrated in the wells in this area at depths ranging from a little more than 1,600 feet down, or between 400 and 600 feet above zone B. Petro-liferous strata occur in some of the wells above this horizon, but they are of little consequence as regards production. The thickness of zone A in the wells varies from 8 to 10 to nearly 150 feet, with several more or less important oil-bearing beds between this and the next lower, or B, zone. The productive measures of zone A consist largely of brown shale, probably seamed or jointed in such a way as to afford a reservoir for the oil, although certain of the wells may obtain their product from fine-grained sands interstratified with the shale.

The second oil zone (B) is the most important one in this area, although it is underlain over at least a part of the area by zone C, which is apparently even more productive. The thickness of zone B is variable, but most of the wells penetrate from 50 to 150 feet of productive strata at this horizon. The oil-bearing beds are similar to those of zone A and consist largely of hard shale, with some fine sands, although excellent examples of a true siliceous sand are obtained in many of the wells. A hard limestone "shell" overlies zone B in one of the wells.

The third oil zone (C) is penetrated by some of the deeper wells at a depth of about 300 or 400 feet below zone B. In one of the wells this C zone appears to be missing, although a good flow of oil is reported from the same hole about 500 feet below the point where it should occur.

The oil from this group of wells is of a dark brown colour and varies in gravity from 24° to 28° B., the lighter oil usually occurring in the wells nearest the main anticline; the average gravity is between 25 and 26 degrees. Much gas is associated with the oil in all of the wells.

The production of the individual wells varies from 60 to 1,000 barrels per day, the latter amount coming from a hole very eccentric in its behaviour, as shewn by its yield of 200 barrels on some days and as high as 1,000 on others; the average daily production for this well is 300 barrels. With the eccentric well omitted, the maximum production is about 500 barrels per day. One well, which produced 150 barrels from zones A and

B, added 350 barrels to its output when deepened to zone C.

Pinal-Folsom-Santa Maria Oil and Gas-Escolle Area.

The area here discussed comprises the Folsom lease, the southern part of the Pinal property, the central and southern portions of the Santa Maria oil and gas lease, and the Escolle property of the Union Oil Co. The wells are located on the west end of Graciosa Ridge and in the canyons on its sides. The region is largely covered by the Fernando sandstone and conglomerate "cap rock," although the Monterey shale is exposed in the side canyons. The structure underlying this part of the field is comparatively simple so far as known, the main Mount Solomon anticline plunging north-westward through its centre, and being the only fold of consequence immediately affecting the area. The location of the anticline near Escolle well No. 3 is based entirely on the well logs, which are at variance with the north-westerly dips in the Fernando in the vicinity of Escolle wells Nos. 2 and 3.

The first oil zone (A), which lies from 250 to 500 feet above zone B, is struck at depths ranging from 1,400 feet down. Its thickness varies from a few feet to about 50 feet; according to the logs, it is lacking in some of the wells, the first oil being encountered in zone B. The oil-bearing strata in zone A are largely shale, but fine sand may also contain some of the petroleum.

The second oil zone (B) is penetrated by all the wells in this area. It varies in thickness from nearly 50 to about 250 feet; one of the wells, however, is said to encounter petroliferous beds intermittently from the top of zone B for a distance of 550 feet downward. The oil-bearing strata consist of alternating hard shale and fine sandstone layers.

The third oil zone (C) occurs from 500 to 600 feet lower in the wells than zone B, and consists of two parts, each from 25 to 50 feet thick, separated by a layer of shale of variable thickness; in one of the wells, however, the intervening shale is missing, and the strata are richly impregnated with oil from the top of the zone for a distance of 250 feet to a point where a 3-foot layer of water sand limits the productive measures. In practically all the wells in the field zone C is very rich, and nearly all the wells tapping it are fine producers.

The oil obtained in the area under discussion averages somewhat better than that in the area to the east, and has a gravity of 26° to 28° B., with an average somewhere between 26 and 27 degrees. As is common in other portions of the field, the gas pressure in most of the wells is high.

The production of the individual wells varies from 100 to 2,700 barrels per day, the well yielding the latter amount being said to have had an initial daily output of 5,000 barrels for a short time. In one series of wells those down the dip are more productive than those nearer the axis of the anticline, the variation being at least partially accounted for by a thickening of the oil-bearing zone away from the axis.

(To be continued.)

THE THIRD INTERNATIONAL PETROLEUM CONGRESS.

MEETINGS OF THE VARIOUS COMMITTEES.

The English Committee of the Congress met on Monday afternoon at the offices of Sir Fortescue Flannery, Bart., London, E.C., and discussed various matters relative to the Congress. Sir Fortescue Flannery took the chair, and explained to the members that though he had desired to present a paper at the Congress, he was afraid that he had not the necessary time at his disposal to prepare it. Pressure was brought to bear upon Sir Fortescue, and he agreed to prepare his paper if he could spare the necessary time.

The hon. secretary — Mr. A. Beeby Thompson — reported that he had written to the Admiralty and the Foreign Office urging those departments to appoint special delegates to the Congress, and had received replies stating that the matter was having careful consideration.

A vote of thanks to the chairman closed the meeting, it being arranged that the members should meet again on August 12th.

—★—

The Roumanian Government has given Mr. A. Saligny, President of the Congress, full powers to take what steps he thinks necessary for the complete success of the Congress. The Government has asked all public authorities to afford every possible assistance to Mr. Saligny, who is now displaying great activity in fulfilling the mission entrusted to him. It is believed that the exhibition, which will be held in conjunction with the Congress, will be located in one of the pavilions of the Jubilee Exhibition. This point will be definitely decided shortly.

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The Roumanian Organisation Committee are daily in receipt of numerous applications to participate in the Congress and excursions, both from Roumania and abroad. The number of people desiring to take part in the excursions is already in excess of the number provided for, and an arrangement is being made to give foreign visitors the preference.

—★—

The French Committee of the coming International Congress has held several meetings recently in Paris, at which questions were discussed relating to the forthcoming Congress and the questions to be discussed thereat. The meetings were of a very representative nature, and had a numerous attendance. There is every indication that France will be very effectively represented at the Congress.

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The German Committee has recently held a meeting under the presidency of Professor Holde, at which questions relating to the organisation of German representation at the forthcoming Congress were discussed.

—★—

The Apollo Co., of Pressburg, Hungary, has informed Mr. Leo Lanczy, president of the Hungarian Committee of the Congress, that it has delegated its president (Mr. B. Enyedy) and Mr. F. MacGarvey to represent it at the Bucarest Congress. The Apollo Co. will also take part in the Exhibition.

THE THIRD INTERNATIONAL CONGRESS OF BORING ENGINEERS.

The third International Congress of Boring Engineers will take place at Hamburg between September 1st and 4th, and simultaneously with it will also be held the thirteenth annual meeting of the Union of German Boring Engineers. The following is a brief programme of the Congress:—

1st September.—Evening reception and mutual introduction of the members of the Congress at the Ulmbooster Fährhause.

2nd September.—At 9 o'clock a.m. the International Congress of Boring Engineers will be opened, and the reading of papers commenced.

The following papers have so far been announced:—

Mr. Tecklenburg: "On Obtaining Electrical Energy at the Mouth of Boreholes."

Mr. R. Sorge: (1) "Theory of the Movement of the Water Jet in Water Flush Drilling" and (2) "Testing of the Water Shut Off in Boreholes."

Mr. Albert Fauck, sen.: (1) "Causes of the Many Technical Accidents in Boreholes in General"; (2) "Results of the Resolutions Passed at the Nurnberg Congress"; (3) "The Question of Preventing Gas Explosions in Boring for Petroleum."

Mr. Anton Pois: "On Power Engines in Boring Work."

Professor Oebbekke: "Training of Boring Engineers at Technical High Schools and Mining Academies."

At 6.30 in the evening there will be a banquet at the restaurant in the Zoological Gardens, a ball and social gathering.

September 3rd.—At 3 o'clock in the afternoon will be opened the third ordinary general meeting of the International Union of Boring Engineers, followed by the thirteenth ordinary general meeting of the Union of German Boring Engineers. Election of officers and general routine business; papers will be read and discussions held. Breakfast at noon. At 5 p.m. members are invited by the management of the Hamburg-American Line to a trip in the roadstead of the port and a visit to one of the Transatlantic liners.

On September 4th, at 8 o'clock a.m., a steamer will leave the St. Paul's landing stage for a trip to Heligoland. Members will return to Hamburg on the same day by the steamer "Prince Henry." The formal closing of the Congress will take place on board the steamer.

Arrangements have been made for entertainment and refreshments for the ladies during the time of the debates on September 2nd and 3rd.

The meetings and the excursions promise to be highly interesting and entertaining. Those who desire to take part are requested to immediately communicate with the chairman of the committee, Mr. R. Walter, Wendenstrasse 133, Hamburg; or to Oberbergrath Tecklenburg, Hermanstrasse 9, Darmstadt.

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Lest we Forget—No firm can become truly great without judicious advertising. Shall we send you the REVIEW's rates?

THE OIL FIELDS OF TRINIDAD.

Another Valuable Geological Report.

(Continued from page 50.)

As the land rose, sub-aerial denudation would come into play, the oil rock itself being exposed over a roughly circular area defined by the extent of the mud volcano.



[Photos by—

THE FAMOUS PITCH LAKE.

—A. Beeby Thompson.]

The anticline being now well marked, gas and oil would be forced from all sides towards the crest, where the exposed oil rock would afford relief of pressure. The bituminous minerals being present in such quantity in the oil rock as to destroy the cohesion of the material on exposure, the solid rock would gradually crumble and flow into the cavity, while lighter oil and gas issuing from below assisted in the incorporation of the inspissating petroleum with the detritus of the oil rock and its cover-clay and all other material washed into the cavity. Thus the basin would be continually enlarged as fresh strata of oil rock were laid open to disintegration. Convection currents in the semi-fluid mass and discharge of gas, while there were still quantities of gas under pressure at deeper levels, would ensure a thorough mixing of the different materials into an emulsion. This action is still going on, but so slowly as to be practically negligible, while gas and light oils have decreased very greatly in quantity as the available supply of petroleum became inspissated. Extrusion of semi-liquid bitumen proceeded to such an extent that an overflow took place and the valley northward towards the sea

was completely filled with asphalt, which is still flowing slowly downward, though there has not been any escape of asphalt from the lake for some years. That this overflow took place under sub-aerial conditions is proved by the weathered state of the superficial deposits beneath

the land pitch, and by the form of the valley floor. This shews also that the site of the lake had by this time reached a considerable height above sea level, and sub-aerial denudation must have meanwhile been affecting the surrounding country, leaving a remnant of the plateau, but trenching it so deeply on the eastward and south-eastward as to expose the oil rock, but not under such conditions as regards gas pressure, etc., as to give rise to mud volcanoes. The flow and exudation may at one time have been fairly rapid, but it is now naturally very sluggish, owing to gradual inspissation. In its latest stage, soil has actually been

washed down from the surrounding country over the margins of the asphalt in several places.

Apart from the neighbourhood of La Brea there is little evidence of oil-bearing conditions among the upper tertiary strata, but, as mentioned above, the deposit of asphalt at Aripiero is not improbably derived from these younger strata, while in one other locality, in an island in the Oropuche lagoon, between the northern and central anticlines a small deposit of hard asphalt, seen among loosely compacted sandstones, is assigned provisionally (the evidence being very scanty) to the petroliferous phase of the upper tertiary rocks.

General Conclusions and Recommendations.

From the evidence as set forth in the preceding pages,



THE VILLAGE OF LA BREA, SHEWING THE LAKE OVERFLOW.

the prospects of oil production throughout a large part of the area appear distinctly good, and it is probable that the central anticline from Point Ligoure to the San Fernando-Siparia road and the northern anticline from the western coast to the Oropuche Lagoon will prove

eventually to be among the most productive parts of the Trinidad oil fields, as they should certainly for some years to come be among the most economical to exploit.

Though the greater part of the area is alienated land, much still remains the property of the Crown. This report would be incomplete without some suggestions as to the most favourable localities for development work, though, on account of the many interests involved, interests of the Crown, of private owners with or without oil rights, and of the holders of options over presumed oil-bearing areas, it is impossible to enter into details.

The district about Point Fortin and Point Ligoure was selected as being the most favourable in which to begin exploration work, on account of (1) proximity to the sea; (2) facilities for landing, constructing a pier to carry a pipe line, and shipping; (3) easiest access to the forests inland; (4) most convenient site for erecting a refinery; (5) extent of surface indications; and (6) favourable and simple geological structure. Parties interested in oil development were accordingly taken over the ground, the geological structure and the advantages of the district explained to them and favourable sites for derricks indicated. The Trinidad Petroleum Co. has since been formed to exploit a concession from the Crown and from private owners in this district. The most important test of this area will be a well south of the anticline, and it should be drilled not less than 200 yards south-south-west of the most southerly of the asphalt deposits. As the dip of the strata decreases rapidly when traced eastward and inland from the coast such a well should reach the highest oil-bearing bed at a depth of not more than 500 feet, while the horizons of oil-bearing bands will continue to be pierced at intervals down to some 1,200 or 1,300 feet.

The further eastward the well is drilled, the shallower will be the depth to the horizon of the uppermost oil rock.

The shallow trough or basin north of the central anticline should also be tested; if the oil rocks are not found to be water-logged in this basin, it should afford an excellent field for exploration, while no well need be drilled deeper than 800 or at most 900 feet.

The rocks to be drilled through should not present many difficulties to the driller. Caving, such as is liable to occur in a well drilled through the lower tertiary clays, should be easily guarded against, and is not likely to occur to any great extent, while there are very few beds of hard rock to be pierced. In fact, the only matter likely to be troublesome will be the shutting off of water in the water sands which occur here and there in the series, more especially near the top. The worst of these water sands, however, will only be pierced in wells at a considerable distance from the oil rock outcrop.

The oil will probably be heavier than the average oil from the Galeota oil sand, with an asphaltic base, and it will be possible to refine it so as to produce a large percentage of good fuel oil. It is perhaps needless to point out that the fuel oil trade will probably become the most profitable branch of the oil industry in Trinidad, as such fuel competes against coal and is not subject

to such great fluctuations in value as are the lighter and more valuable oils (petrol and illuminating oil). Further, the fuel oil should have a ready sale on the Gulf of Paria, and will not need to be exported and come into competition with the products of other oil fields.

The above notes will apply not only to the Guapo district, but to the central anticline as far eastward as the Oropuche-Siparia road, except that the geological conditions appear to be rather more favourable on the eastern part of the line; dips are, generally speaking, lower, and a greater extent of country is available without resorting to deep drilling. The Fyzabad district deserves to be mentioned specially as a promising field for development work; the ground is fairly well opened up by roads, the surface indications are of great extent on both sides of the anticline, the geological conditions are favourable, and the solid evidence is sufficiently abundant to enable the depth to the oil rocks to be calculated fairly accurately in any locality.

Approaching the Oropuche lagoon, clays, as has been mentioned, become more conspicuous, and may occasion some difficulty in drilling, but the oil rocks are more completely covered; gas pressure will probably be greater, and the oil may be somewhat lighter. It is possible that the oil rocks thin out in this direction, but no definite statement can be made on this point till we have evidence from borings. A well should certainly be drilled on the crest of the anticline where unbroken clays occupy the surface: a depth of 500-600 feet will probably be sufficient to give all the evidence required.

The northern anticline, so far as conditions affecting the production of oil is concerned, resembles the central anticline closely, but the flexure is rather flatter and less deeply denuded. The northern flank of it appears a very favourable field for drilling, and the evidence is sufficient to enable depths to the oil rocks to be calculated accurately. Beyond the three-mile limit from the Pitch Lake the anticline becomes very flat, but oil shows are still frequent, and the ground might well repay exploitation. The southern flank of this anticline should be tested, as convenient places for drilling can easily be selected and the wells need not be deeper than 700 feet.

Nearing the Oropuche lagoon, where the naparima phase of the middle tertiaries begins, the oil rocks probably thin out to some extent, but that there are oil-bearing rocks to be struck has been proved at Aripere. The unconformable overlap of the upper tertiaries conceals evidence further eastward, and drilling cannot be recommended until development of the contiguous ground has been undertaken.

East of the Oropuche lagoon the structure becomes very obscure, clays and alluvium covering almost the whole area. The anticline is not clearly defined, and is probably represented by more than one gentle undulation. "Wildcat" drilling in this vicinity would furnish very valuable evidence, but a series of small excavations, to obtain data regarding the structure, should be made before any experimental drilling is attempted.

(To be concluded.)

THE LATEST IMPROVEMENT IN PETROLEUM INCANDESCENT LAMPS.

An English patent has been granted to Mr. G. Galkin, of 7, Zastavskaya, St. Petersburg, for an invention relative to petroleum incandescent lamps. Petroleum is evaporated, and the vapours are mixed with air. This gaseous mixture is then ignited, and the resulting flame of a very high temperature brings a mantle of refractory material to incandescence.

In this lamp a reservoir or chamber of air under pressure is arranged below the petroleum reservoir with which the chamber of air communicates by an intermediate regulating device. By the action of this latter a constant pressure of about one-half an atmosphere is exerted on the surface of the petroleum, thus forcing it to ascend into the evaporating tube. The regulating device is closed automatically as soon as the pressure in the air chamber exceeds, say, one-half an atmosphere, so that by further pumping air into this chamber air under pressure is accumulated therein.

A chamber containing air under pressure is arranged below the petroleum reservoir, and communicates by means of a valve and tube with a regulating device arranged above the petroleum reservoir and communicating with it by a suitable tube and valve. The petroleum reservoir is in communication by a tube with the evaporating tube arranged above the burner.

The air admission valve has a suitable branch to which the tube of an air-pump can be attached. A closing device controls the passage of air into the air reservoir, and from this latter into the tube leading to the regulating device.

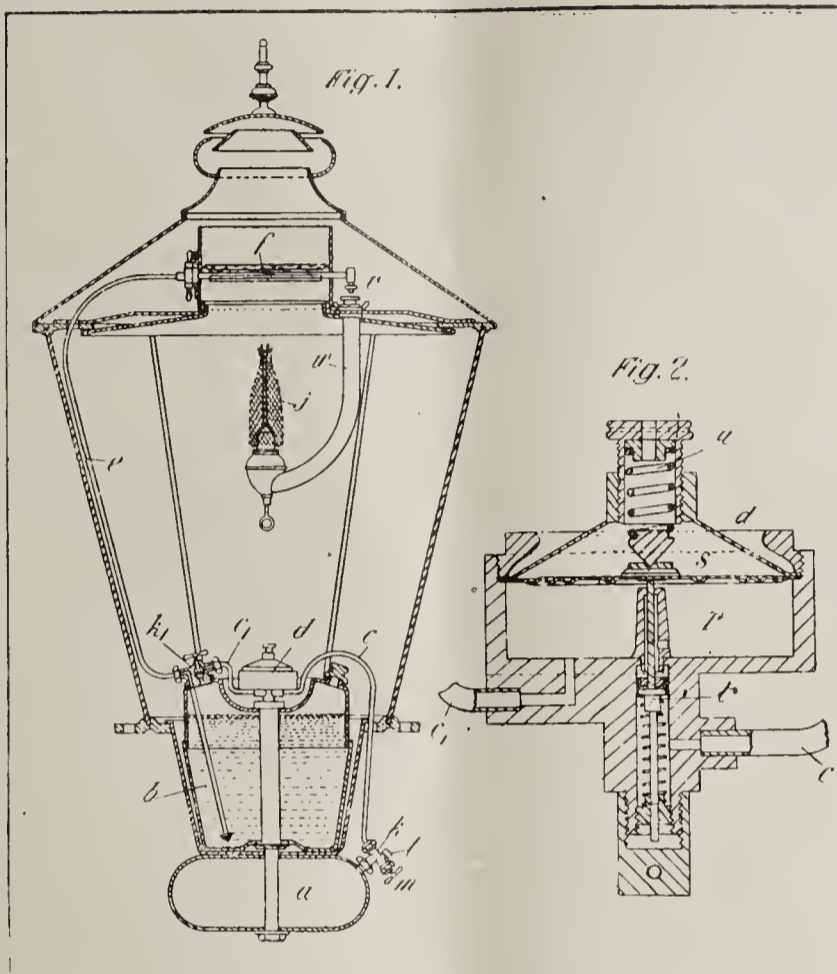
The regulating device has the usual construction of gas pressure regulators, and consists of a chamber having an elastic partition or diaphragm to which a valve is attached. The main chamber is in communication with the tubes leading to the regulating device; and as soon as the pressure in the chamber exceeds a certain limit (say one-half an atmosphere) the elastic membrane of the diaphragm overcomes the opposing

pressure of a controlling spring and closes a valve so as to interrupt the communication between the tubes leading to the regulating device.

The action of the lamp, which can easily be understood by the accompanying sketch, is as follows:—

The petroleum reservoir *b* being filled with petroleum, the valve is opened and air is pumped into the air chamber *a* through the air pump branch *l*. The pumping is continued until a certain pressure (say one atmosphere) is reached in the reservoir *a*. Then the valve *k* is closed so that the reservoir or air chamber *a*

remains only in communication with the tube *c*. Finally, the valve *k₁* is opened, and petroleum is allowed to enter the evaporating tube *f*, which has previously been heated by a spirit flame or the like. The petroleum vapours generated in the tube *f* are injected through a small opening *v* into the tube *w* in which air is drawn by the jet of petroleum vapours, and the resulting mixture of these vapours with air reaches the burner *j*, and being ignited brings the mantle of the burner to incandescence.



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MEXICAN PETROLEUM PROSPECTS.

Two years ago, points out the *Pacific Mining and Oil Reporter*, some local excitement was created in the vicinity of Tampico, Mexico, by the finding of oil indications in the neighbourhood of Guadalupe. That region of the valley of Mexico is most peculiar in its geological formation and character. It seems unreasonable to suppose that petroleum could be found at this altitude above sea level, about 7,500 feet, and in ground of volcanic formation.

This big valley of Mexico, nearly 60 miles square, has been often supposed to be the crater of an enormous volcano or group of volcanoes, the most enormous in the world's history, and comparable alone to Copernicus and the other dead craters of the moon. To the southwest of the valley is the dead volcano of Ajusco, 12,000 feet above the sea level, and to the southeast the twin mountains of Popocatepetl and Ixaccihuatl, more than 5,000 feet higher than Ajusco.

When this last named mountain was in eruption, its flow of lava entered the valley for 20 or 30 miles and the beds are to be found near Coyoacan, 40 feet in thickness in places, stretching for miles, a frozen sea of stone. There does not seem to be any authentic record of this great eruption, but the tracings of lava, from Ajusco westward to the very Pacific, compel the belief that the flow went westward as well, or else that, in sympathy with the seismic disturbances in the valley of Mexico, volcanic eruptions may have occurred along the line of the lava flow towards the Pacific, similar to the berth of the baby volcano Jorullo, that was born in the state of Vera Cruz in a night during the seventeenth century. Neither of the two great mountains to the south-east of the valley are active in out flow, but smoke more or less, and there is some discharge.

In the vicinity of Guadalupe, where the oil indications were found two years ago, is a small hill called the Penon, which is also an extinct volcanic cone, a low-lying hill not much higher than Chapultepec. It sprang out of the bosom of the valley lakes at some period in Mexican history that amounts to the prehistoric, as did Jorullo, but while the latter hill is about 600 feet high and constantly active, the Penon is not much more than half that height and quiescent.

But that the Penon was once active is admitted by the Mexican archæological authorities, and is now considered a vent; during the late earthquake that lasted in this valley four minutes the rumbles round the base of Popocatepetl and the Penon were said to have been frightful, indicating their plutonic activity with difficulty restrained. Round the base of the Penon is the great salt lake of Texcoco, of about 100 square miles. That oil should have been found close to this lake and its overhanging Penon, seems singular. Considerable money was expended in development work, but so far only marsh oil has been demonstrated.

In the state of Oaxaca and at other points along the isthmus of Tehuantepec, oil has been found of a high grade. But the owners of the finds conceal the quantity and quantity. Outside of the Tampico district a really

profitable oil field has not been fully developed in Mexico. By analogy such properties exist, but none have as yet, with the possible exception of the Furber wells at Vera Cruz, been brought into the quantities of commensurate commerce; in other words, none other has as yet been proven to yield in sufficient quantities to make oil fuel a marketable commodity in Mexico.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM CO., LTD.—The production for the week ended July 20th, was 239,000 poods, or 3,853 tons; and for the week ended July 27th was 243,000 poods, or 3,917 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL CO., LTD.—The production for the week ended July 21st was 196,000 poods, or 3,160 tons; and for the week ended July 28th was 201,000 poods, or 3,241 tons.

SPIES PETROLEUM CO., LTD.—The output for the week ended 21st July was 148,385 poods, or 2,393 tons; and for the week ended 28th July, 149,115 poods, or 2,405 tons.

THE EUROPEAN PETROLEUM CO., LTD.—The production for the week ended July 21st was 126,156 poods, or 2,034 tons; and for the week ended 28th July was 125,898 poods, or 2,030 tons.

Mr. Anton Raky.—The *Moniteur du Pétrole Roumain* publishes an authorised denial of the report recently published that Mr. Anton Raky has retired from the management of the Regatul Roman Co.

THE THIRD International Petroleum Congress

This Congress will take place at Bucarest during the first half of next month under the Patronage of His Royal Highness, Prince Ferdinand, Heir to the Throne of Roumania.

Upon the occasion there will be organised an Exhibition of Instruments, Apparatus, Reports and Statistical Data dealing with the Petroleum Industry.

The Congress and the Exhibition will comprise the following sections:—

SECTION I.

GEOLOGY, EXPLORATION, EXPLOITATION.

SECTION II.

CHEMISTRY and TECHNOLOGY of PETROLEUM.

SECTION III.

LEGISLATION, COMMERCE.

Persons desirous of joining the Congress are requested to communicate with the—

COMMISSION DU PETROLE

LABORATOIRE DE MINÉRALOGIE À L'UNIVERSITÉ,
BUCAREST, ROUMANIA.

The American Oil Market.

New York, Week ended July 20th.

The Congo pool in Hancock county, W. Va., is again to the front as the feature of the week in the lower south-west oil fields. On the east side of developments two good producers were brought in, both on second tests and both credited with an increased production of 350 barrels a day. The high average of the pool will probably be maintained for some time by these results. New operations have been keenly stimulated and work is being pushed well beyond defined limits. In the older part of the pool two completions seemed promising for a 50 and a 125 barrel producer, and several wells when shot shewing material increase. Deep sand drilling in Monongalia county, W. Va., brought some encouraging results. The latest report on the gusher encountered recently in Greene county, Pa., was to the effect that it was maintaining a flow of 500 barrels a day. Dusters and light producers continue the rule in south-eastern Ohio. Operations in the Lima fields, says the *Oil, Paint and Drug Reporter*, are devoid of particular interest. The most interesting news from the mid-Continent field was the report of a strike in the Morris district of Indian Territory that was credited with an initial production of 2,000 barrels.

In the Cherokee district good producers are not infrequent, and several have shewn an initial production in excess of 500 barrels. Some of the old wells are maintaining a creditable average. Reports from Illinois indicate unabated interest in the oil fields, but little of an unusual character has come to the surface. Efforts are centred in providing an outlet for the heavy surplus of oil. Completions in the Kentucky and Tennessee fields shew a general abatement of activity, which is usually experienced at this season. The tracts in the neighbourhood of San Antonio, Texas, are the scene of new interest, and the prospects are considered promising. A further advance has been recorded in Texas and Louisiana oil, establishing quotations as follows:—Sour Lake, 88c.; Saratoga, 84c.; Humble, 86c.; Jennings, 83c.; Shreveport, 83c.

REFINED AND PRODUCTS.—The local market for refined has been without noteworthy feature, and quotations have remained stationary. The tendency is regarded as one of fully maintained firmness. The demand for domestic account is reported well up to a seasonable average. Engagements for export for the week were rather light, comprising 75,000 cases, to Melbourne or Sydney, September-October shipment, and 26,000 cases to the Canary Islands, prompt shipment. Clearances aggregated 12,775,360 gallons from New York and 7,849,115 gallons from Philadelphia, against 11,477,140 and 6,576,026 gallons respectively during the previous week. American case oil is quoted at a slight advance in Bombay, but an easier market is reported for Russian oil in Calcutta. The American product has scored an advance in Yokohama. Quotations for shipment in cases from New York by sailing vessel to the principal foreign ports may be repeated as follows: Amoy, 18½c.; Calcutta, 12c.; Java, 15@18c.; Hong Kong, 18½c.; Rangoon, 19c.; Saigon, 20½c.; Shanghai, 20½c.; Singapore, 16@17c.; Yokohama, 18½@19c. per case. Continued activity has characterised the market for the products during the week both for home and foreign requirements, and it has been found difficult to keep apace with the demand. Clearances of naphtha have been unusually heavy, aggregating 1,110,880 gallons against 45,150 gallons during the previous week. Values are strongly maintained on the recently prevailing basis.

Residuum has been in better request for export and shipments aggregating 4,390 gallons have been reported.

CLOSING QUOTATIONS.

	CRUDE.	{ Week ended	
		July 13. 1907.	July 20. 1907.
Pennsylvania crude in bbls.		\$8.20	\$8.20
Pennsylvania crude in bulk		4.75	4.75
Residuum, bbls. for export		6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—
Week ended

	July 20. 1906.	July 20. 1907.
Tiona	1.74	1.78
Pennsylvania	1.64	1.78
North Lima	0.98	0.94
South Lima	0.93	0.89
Indiana	0.93	0.89
CANADIAN OIL:		
Petrolia	1.37	1.34

REFINED—FOR EXPORT.

	Week ended July 20.	
	S.W.	W.W.
Barrels, cargo per gal.	\$8.45	@10.45
Philadelphia	8.40	@10.40
Bulk, New York	5.00	@7.00
Bulk, Philadelphia	4.95	@6.95
Cases, New York	10.90	@13.90
Cases, Philadelphia	10.85	@13.85

REFINED IN CASES—110 FIRE TEST.

	Week ended	
	July 13. 1907.	July 20. 1907.
3,000 to 10,000	10.80	10.80
1,000 to 3,000	10.85	10.85

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

	Week ended	
	July 13.	July 20.
120 fire test, S.W. .. in barrels	12	12
130 fire test, S.W.	12½	12½
150 fire test, W.W.	13½	13½
In bulk from tanks	10	10
300 fire test	13½@14	13½@14

NAPHTHA AND GASOLENE.

	Week ended	
	July 13.	July 20.
Naphtha, crude, car. lots, 68 @ 72 deg.	17.00	17.00
Gasolene, 86 deg... ..	24.00	24.00

PENNSYLVANIAN OIL RUNS from July 11th to July 15th were:—July 11th, 91,508; July 12th and 13th, 237,608; July 14th, 10,322; and July 15th, 113,752. For the month of June, 2,756,086.

THE DELIVERIES OF PENNSYLVANIA OIL from July 11th to July 16th were:—July 11th, 161,012; July 12th, 202,661; July 13th and 14th, 190,040; July 15th, 120,176; and July 16th, 150,630. For the month of June, 5,071,735.

CLEARANCES FOR THE WEEK.

During the week ended July 19th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1906.
Refined	12,775,360	249,573,190	256,520,119
Crude	—	1,280,925	232,800
Naphtha	1,110,880	5,479,150	11,973,507
Residuum	4,390	375,877	1,000

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended July 19th ..	17,033,813
Total from New York, from Jan. 1st, 1907 ..	384,229,840
Same period last year	342,942,972
Increase	41,286,868
From United States, week ended July 19th ..	29,681,953
Total from United States, since Jan. 1st, 1907 ..	679,971,639
Same period last year	648,331,337
Increase	31,640,302

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The "Review" Shipping List.

AUGUST 2, 1907.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From	For.	Latest Date and Position.
ALCHYMIST	Manchester..	Lisbon.....	P. Eastham, July 25	ETELKA	Genoa.....	Batoum	L. July 28
ALICE ISABELLE..	Philadelphia	Sables d'Olonne	Arr. July 27	EUPLECTELA	Tyne	Philadelphia	Arr. July 28
ALEMBIC	New York ..	Sydney(C.B.)	L. July 12	EXCELSIOR	Rotterdam ..	New York ..	P. Scilly, July 29
AMERICAN	Antwerp....	New York ..	P. Scilly, July 31	EZIO	—	—	Coasting Peru
APPALACHEE	San Francisco	Hankow	L. July 6	FRANCE MARIE ..	Marseilles ..	Philadelphia	Arr. July 26
APSCHERON.....	Messina	Ibrail	P. Constant'ple, July 29	GEESTEMUNDE ..	Stettin & Tyne	New York ..	Arr. July 26
ARAL.....	Philadelphia	Rotterdam ..	P. Dover, July 31	GENESSE	Manchester	Newport Nws	Arr. July 26
ARAS.....	Manchester	Newport....	Arr. July 27	GEORGIAN	Liverpool ..	Philadelphia	Arr. July 28
ARGYLL	—	—	Coasting U.S. (Pacific)	GOLDMOUTH	Bremerhaven	—	At Port Said, July 20
ASHTABULA	Shanghai ..	San Francisco	Arr. July 20	GUTHEIL	Christiana ..	Philadelphia	Arr. July 30
ASTRAKHAN.....	Hamburg ..	Philadelphia	P. Butt of Lewis, July 20	HAINAUT	Algiers	Antwerp	Arr. July 30
ATLAS	—	—	Coasting U.S. (Pacific)	HARRY	Kustendje ..	Rouen	L. Constant'ple, July 25
AUGUSTA	Barry	Havana	P. Lundy Island, July 11	WADSWORTH	Philadelphia	Nordenhamn	At Bremerhaven, July 27
AUGUST KORFF..	Manchester	Philadelphia	P. Ellesmere Port July 31	HELOIS.....	London and Thameshaven	Philadelphia	Arr. July 24
AUREOLE	Sunderland	New York ..	Arr. July 14	HERMIONE	Batoum	Antwerp	L. Constant'ple, July 22
AZOV.....	—	—	Trading on W.C. of South Amca.	HOTHAM	—	—	P. Butt of Lewis, July 25
BAKU STANDARD	Kustendje ..	Rouen	P. Havre, July 30	HOUSATONIC	—	—	Tr. on Lakes btn. U.S.A. and Can.
BALAKANI.....	London	Kustendje ..	P. Gibraltar, July 25	IMPERIAL	—	—	Arr. July 29
BATOUM	Kobe	Palembang..	L. July 11	JOANNIS COUTZIS	Batoum	Rouen	Arr. July 25-26
BAYONNE	Portici.....	Kustendje ..	L. Constant'ple, July 25	J.B.AUG.KESSLER	Batoum	Port Said ..	L. Constant'ple, July 26
BEACON LIGHT .	Philadelphia	London	Arr. July 29	JAMES BRAND	Kustendje ..	London	P. Gibraltar, July 25
BEME	Rangoon....	Calcutta	L. July 30	JULES HENRI	Philadelphia	Tarragona ..	P. Sagres, July 30
BLOOMFIELD	Philadelphia	Flushing....	L. July 19	KURA	Batoum	London	P. Scilly, July 28
BORJOM	Batoum	Alexandria ..	L. Constant'ple, July 20	LA CAMPINE.....	Antwerp	Philadelphia	L. Terneuse, July 30
BRILLIANT	Philadelphia	Copenhagen	Arr. July 28	LA FLANDRE	Ghent	New York ..	L. Constant'ple, July 25
BROADMAYNE	Philadelphia	Cette	P. Gibraltar, July 28	LA HESBAYE.....	Batoum	Antwerp	Arr. June 16
BULLMOUTH	Hankow....	Shanghai ..	Arr. May 25	LA MADELEINE ..	Algiers	Brest	L. July 19
BULYSES	Batoum	Bombay	Arr. July 22	LA VIGUESA	Vigo.....	Philadelphia	P. Gibraltar, July 31
BURGERMEISTER PETERSEN	New York ..	Danzig	L. July 16	LACKAWANNA..	Sabang	—	At San Francisco, July 2
CALCUTTA.....	San Francisco	Shanghai ..	L. May 27	LANSING.....	—	—	Arr. July 21
CAPTAIN A. F. LUCA	London	Sabine Pass	Arr. June 17	LE COQ.....	Cardiff.....	Philadelphia	L. Cette, July 23
CARDIUM	Singapore ..	—	P. Dover, July 31	LOUTSCH	Kustendje ..	Marseilles ..	Arr. July 14
CATANIA	Seattle.....	Port Harford	Arr. June 26	LUCERNA	Tyne	Philadelphia	P. Scilly, July 20
CAUCASIAN	Kustendje ..	Antwerp	Arr. July 31	LUCILINE	Rouen	Philadelphia	P. Dunnet Head, July 22
CHARLOIS	Tyne	Philadelphia	P. Dunnet Head, July 27	LUMEN.....	Tyne	Philadelphia	L. July 17
CHESAPEAKE	Rotterdam ..	Tyne	Arr. July 26	MANHATTAN	New York ..	Cette	P. St. Michael's, July 25
CHESTER	Philadelphia	Antwerp	P. Lizard, July 31	MANNHEIM	Alexandria..	N. America	Arr. July 28
CIRCASIAN	Buenos Ayres	Callao	L. Monte Video, May 5	MARGARETHA ..	Rotterdam ..	New York ..	Arr. July 18
CLAM	Freshwater..	Suez	P. Perim, July 31	MAVERICK.....	Cardiff	Rio Janeiro	L. July 14
COL. E. L. DRAKE	San Francisco	Seattle.....	Arr. July 12	METEOR	Port Harford	San Francisco	At Aroe Bay, July 2
COWRIE	New York ..	Trieste.....	Cld. Venice, July 27	MEXICAN PRINCE	Nagasaki ..	Singapore ..	Arr. July 30
CUYAHOGA	Philadelphia	Liverpool ..	Arr. July 28	MIRA	Liverpool ..	London	Arr. July 29
CYMBELINE	Manchester	Philadelphia	Arr. July 19	MUREX.....	Penarth	New York ..	L. July 1
CZAR NICOLAI II.	Hamburg ..	Batoum	P. Gibraltar, July 24	NARRAGANSETT..	Shanghai ..	—	Arr. July 30
DAGHESTAN.....	Port Arthur (Texas)	Rouen	L. Newport News July 24	NERITE	New York ..	London	Tr. in China Seas
DAKOTAH	San Francisco	Hong Kong	Arr. July 31	NEW YORK	Southampton	New York ..	120 W. of Lizard, July 28
DELAWARE	Palembang..	New York ..	P. Tarifa, July 18	OCEAN	Antwerp	Batoum	P. Gibraltar, July 22-23
DEUTSCHLAND ..	Hamburg ..	New York ..	Arr. July 21	OILFIELD	Penarth	Philadelphia	P. Barry Island, July 31
DIAMANT	Hamburg ..	Philadelphia	Arr. July 28	ORANJE PRINCE..	Tyne	Cuba	P. Beachy Head, July 20
EDWARD	Swansea	—	P. Mumbles, July 31	ORIFLAMME	Rouen	Cardiff	Arr. July 25
DAWSON	—	—	L. July 6	OSCEOLA	Genoa	New York ..	Arr. July 21
ELAX.....	Singapore ..	—	Arr. July 30	OTTAWA	Tampico	London	Arr. July 30
ELSIE MARIE	New York ..	Amsterdam..	P. Reedy Island, June 19	OURAL	Tyne	Batoum	P. Finisterre, July 25
ENERGIE	Philadelphia	Oxelosund ..	Arr. July 25	PALEMBANG	Balekpapan	Singapore ..	Arr. July 19
ERIVAN	Hamburg ..	Tyne	—	PAULA	Aarhus	Tyne	Arr. July 27

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PECTAN	London	Galveston ..	P. Lizard, July 21	SINGU	—	—	Tr. in East Indies
PENNOIL.....	Tyne	Philadelphia	P. Dunnet Head, July 24	SNOWFLAKE.....	Norfolk (Va.)	London	Arr. July 29
PERLAK	Hong Kong	Balekpappan	L. June 27	SPONDILUS	Cardiff.....	Singapore ..	Arr. July 15
PHOEBUS	New York ..	Hamburg ..	L. July 25	STANDARD	Stettin.....	New York ..	Arr. July 21
PINNA	Antwerp	San Francisco	L. St. Vincent (C.V.), June 13	STROMBUS	Samboe	—	L. July 6
POTOMAC	Avonmouth	Philadelphia	At New York, July 26	SURAM.....	Tyne	New York ..	P. Butt of Lewis, July 31
PROMETHEUS....	Hamburg & Tyne	New York ..	Arr. July 26	SUWANEE	Hull.....	Philadelphia	L. July 15
PRUDENTIA	Batoum	Alexandria..	At Port Said, July 20	SVIET	Kustendje ..	Rouen.....	L. Algiers, July 24
QUEVILLY.....	Philadelphia	Rouen.....	Arr. July 29	TELENA	Soesoe.....	Thameshaven	Arr. July 24-26
RION	Philadelphia	London	P. Del. Break, July 17	TEREK.....	Hamburg ..	—	P. Gibraltar, July 28
ROCK LIGHT	Belfast	Cardiff	Arr. July 23	TIFLIS	Philadelphia	Hamburg ..	P. Dungeness, Aug. 1
ROMANY.....	London	—	P. Tarifa, July 30	TIOGA	Gulf Port ..	Sabine	L. July 17
ROSSIJA	Hartlepool ..	Archangel ..	Arr. July 11	TONAWANDA	San Francisco	Shanghai ..	L. July 1
ROTTERDAM	Barry	Santos.....	L. Bahia, July 23	TROCAS	Shanghai ..	—	L. July 3
RUSSIAN PRINCE	Havana	Philadelphia	Cld. New York, July 18	TURBO.....	Batoum	Hamburg ..	At London, June 18
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	TUSCARORA	Calcutta & Boston	New York ..	Arr. July 11
SAN CRISTOBAL..	Tyne	—	P. Dungeness, July 22	TWINGONE	Rangoon ..	Madras	L. Ju'y 16
SAN IGNACIO DE LOYOLA	Pasages	Philadelphia	L. July 9	VEDRA.....	Alexandria ..	Aroe Bay ..	At Singapore, June 30
SAXOLEINE	Tyne	Philadelphia	Arr. July 19	VILLE DE DIEPPE	Havre	Passage West	Arr. July 29 (For repairs.)
SEMINOLE.....	Shanghai ..	San Francisco	At Calcutta, June 25	VOLUTE	Hankow	—	L. July 7
				WASHINGTON....	New York ..	Hamburg ..	Arr. July 20
				WEEHAWKEN	Barrow	Philadelphia	Arr. July 21
				WILLKOMMEN....	Stettin.....	Tyne	L. July 29
				WINNEBAGO	Itozaki	San Francisco	Arr. July 10

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

August 2nd, 1907.

Since our last report, the prices of Refined petroleum have eased, and the present quotations are:—Russian, Spot 6d.; American, Spot 6½d.-6¾d.; Water White, 7½d.-7¾d.; Roumanian, 6¼d.

LUBRICATING OILS.

There have been slight alterations in these, the following being the quotations:—

American pale, £7 7s. 6d. to £11.
American dark cylinder, from £8 10s.
American filtered cylinder, from £11 2s. 6d.
Shellene, £5. No. 1 Russian, £10 5s.

TURPENTINE.

This has been a quiet market since our last report, prices being slightly easier:—American, Spot, 41s. 6d.; September to December, 42s. 9d.; January to April, 43s. 9d.

LIVERPOOL OIL MARKET.

August 1st.

Refined oils are quiet, and sellers quote 6½d. for Russian, Galician or Roumanian; and 6¾d. to 7¾d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0½d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, August 1st.

Refined, in cases, is steady at 10'90; Standard White, 8'45; Credit balances, 1'78c.

PHILADELPHIA, August 1st.

Standard White is still quoted at 8'40.

RUSSIA.

BAKU, July 31st.

The Baku oil market is quiet. Light crude oil, spot, 30¾ to 31 copecs per pood; residuals, in ships 30½ to 31 copecs; kerosene, in ships, 42 copecs.

BELGIUM.

ANTWERP, July 27th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, July 27th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34'25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, July 27th.

The kerosene market is firm. The price of American Standard White is 7'25 marks per 50 kilos, Russian, 7'00 marks.

ROUMANIA.

July 24th.

Crude oil from different fields, including pipe line charges, per 100 kgs.	...	4'00-4'20
Refined oil, exclusive of taxes	...	8'00- —
Motor benzine, including taxes	...	23'00-24'00
Benzine, doubly refined	...	25'00-26'0
Residuals in tank waggons, at refinery	...	3'60-3'700
Paraffin	...	120'00-125'00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7'50- —
Benzine, sp. gr. 0'710-0'715	... 23'00-24'00
„ sp. gr. 0'715-0'720	... 22'00-23'00
„ sp. gr. 0'730-0'740	... 15'00-16'00
„ sp. gr. 0'745-0'755	... 11'00-12'00

INDIA.

BOMBAY, July 17th.

Market strong.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg.	.. ..	Rs. 6 0 2
„ Chester, 125 deg.	.. ..	4 8 2
„ Monkey Brand, 125 deg.	.. ..	4 2 2
„ Bulk, 125 deg. (in local made tins) ..	.. ..	3 11 0
„ 125 deg. (8 Imperial gallons)	.. ..	3 1 0
„ "White Camelia" brand, 125 deg.	.. ..	No stock.

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair	.. ..	3 7 0
Sumatra "Rising Sun," bulk, per unit	.. ..	3 1 0
„ „ „ tins, per pair	3 11 0
Silverlight cases, per case	5 2 0
Sumatra, "Anchor" per case	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for
this Journal by . . .
the Custom House.

FOR THE WEEK ENDED 22ND JULY, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
July. LONDON—				
16	Anglo-American Oil Co.	Lub.	44,000	New York
16	Produce Brokers	"	10,000	"
16	Fielder, Hickman and Co.	"	31,920	"
16	R. Park and Co.	Lub. Gr.	1,280	Marseilles
17	London & India Docks Co.	"	1,800	New York
17	"	Lub.	2,080	Hamburg
18	Page, Son and East	Lub. Gr.	5,320	Antwerp
18	American Express Co.	Lub.	250	New York
19	A. Brown and Co.	"	2,400	Philadel.
20	Lubricating & Fuel Oils, Ltd.	Engine Oil	365,000	Batoum
	(Oural)			
20	"	Black Oil	223,060	"
20	"	Cylin. Oil	5,000	"
20	T. H. Lee	M. Lub.	290	Hamburg
20	"	M. L. Gr.	380	"
20	London and India Docks Co.	Lub.	1,200	"
22	Mordaunt Bros.	"	2,460	Philadel.
22	"	"	4,100	New York
22	Scott's Wharf	"	2,000	"
22	Bessler, Waechter and Co.	"	1,480	"
22	Page, Son and East	Lub. Oil and Grease	120	Antwerp
LIVERPOOL—				
16	Meade-King, Robinson & Co.	M. Lub.	8,000	New York
16	J. W. Fisher and Co.	"	2,000	"
16	W. B. Dick and Co.	"	12,440	"
16	George B. Taylor	"	1,000	"
16	Stockdale and Doel	"	5,230	Boston
16	Gough and Crossthwaite	M. Lub. (in bottles)	120	New York
17	Worthington and Boler	Lub.	4,080	Philadel.
18	Vacuum Oil Co.	Lub. Gr.	12,640	Antwerp
18	W. B. Dick and Co.	Lub.	4,230	Philadel.
18	Meade-King, Robinson & Co.	"	32,000	"
19	Crew, Levick and Co.	"	7,450	"
19	"	M. Colza	5,040	"
20	Meade-King, Robinson & Co.	M. Lub.	6,400	"
22	"	"	2,480	Baltimore
22	W. B. Dick and Co.	Lub.	16,550	New York
22	A. Hopps and Sons	M. Lub.	4,800	"
22	George B. Taylor	"	119,520	"
22	Pickfords, Ltd.	Lub. Oil and Paste	500	Hamburg
BRISTOL—				
16	Western Pet. Co. (Margaretha)	R. Lamp	5,170	Batoum
19	Anglo-Bosphorus Oil Co.	M. L. Gr.	2,000	Hamburg
19	Pickford's	Lub. Oil and Paste	170	"
20	E. Stock and Sons	M. Lub.	240	"
CARDIFF—				
19	Guthrie, Heywood and Co.	Lub.	24,000	Baltimore

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
July. GLOUCESTER—				
22	Bristol Steam Nav. Co.	Lub.	2,000	Hamburg
GRIMSBY—				
19	Burt, Boulton and Heywood	Creosote (Commercial)	23,000	Selzaette
HULL—				
16	Meade-King, Robinson & Co.	Naphtha	32,000	Rotterdam
16	Wilsons and N.E. Railway Shipping Co.	Lub.	240	Hamburg
18	"	"	560	Antwerp
18	"	"	800	Rouen
18	"	"	2,500	Hamburg
18	T. Meredith, Roberts and Co.	"	450	Antwerp
18	W. Gilyott and Co.	"	45,800	New York
18	Hull & Barnsley S.S. Line	"	320	Rotterdam
18	Hull & Netherlands S.S. Co.	Tar oil	2,460	"
MANCHESTER—				
16	Liverpool Storage Co.	Lub.	3,200	New York
16	Meade-King, Robinson & Co.	M. Colza	2,400	"
16	Bramwell, Fern and Co.	M. Lub.	4,770	"
16	W. Hodgson and Co.	"	2,420	"
16	"	M. L. Gr.	850	"
16	Geo. B. Taylor	M. Lub.	132,160	"
16	J. T. Fletcher and Co.	"	30	Antwerp
18	Schofield and Co.	Lub.	520	Hamburg
18	Meade-King, Robinson & Co.	"	10,400	"
18	Geo. B. Taylor	"	120	"
19	D. Currie and Co.	M. Lub.	840	"
19	"	M. L. Gr.	800	"
22	British Pet. Co. (Aras)	R. Illum.	1,030,000	Philadel.
MIDDLESBRO'—				
18	E. Harris and Co.	Lub.	840	Antwerp
QUEENBORO'—				
18	S. Eastern and Chatham Ry.	Kerosene	50	Flushing
SOUTHAMPTON—				
22	American Line	Lub.	180	New York
GLASGOW—				
17	Anchor Line	"	10,690	"
22	"	"	5,610	"
22	"	M. Colza	4,800	"
22	J. and A. Allan	"	5,000	"
22	"	M. Lub.	46,800	"
GRANGEMOUTH—				
19	W. Graham-Yooll and Co.	Illum.	3,160	Hamburg
19	J. Currie and Co.	Lub.	7,400	"
20	"	"	920	"
20	"	L. Paste	980	"
LEITH—				
16	J. Currie and Co.	Lub.	120	Bremen
16	G. Gibson and Co.	"	280	Antwerp
16	J. Cormack and Co.	M. Lub.	2,000	Riga
18	J. Currie and Co.	Lub.	140	Hamburg

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== QUALITY TELLS. ==

To Dealers only.

DATE	PORT AND IMPORTERS	DESCRIPTION	NO. OF GALLS.	PORT WHENCE.
July	BELFAST—			
17	British Pet. Co. (Rocklight)	Lamp	1,050,000	New York
	LIMERICK—			
18	British Pet. Co. (Aras)	.. ..	224,000	Philadel.
			3,642,010	
	Add to Correct :—			
	MANCHESTER—			
6/7	British Petroleum Co. (Mira)	R.Illum.	30,160	New York
	NEWCASTLE—			
6/7	P. H. Matthiessen and Co.	Cylinder	1,400	Bergen
	MANCHESTER—			
29/6	British Petroleum Co. (James Brand)	Gas	83,690	Philadel.
	Total for Week	.. ..	3,757,260	

FOR THE WEEK ENDED JULY 29TH, 1907—

	LONDON—			
23	Linck, Moeller and Co.	.. Tar Oil	17,600	Archangel
23	Bowring Petroleum Co.	.. Lub.	7,000	New York
23	Montague Record	.. ..	6,000	Philadel.
23	Worthington and Boler	.. ..	4,400	Philadel.
23	F. Randall	.. ..	15,000	..
23	E. J. Wilkinshaw	.. ..	14,000	..
23	Lub. and Fuel Oils Co.	.. ..	32,390	..
23	A. Brown and Co.	.. Lamp	4,000	..
23	Asiatic Petro. Co. (Telena)	.. Benzine	1,726,500	Singapore
24	Fielder, Hickman and Co.	.. Lub.	60,880	Philadel.
24	Ocean Oil Co.	.. ..	4,000	..
24	London and India Dock Co.	.. ..	900	Hamburg
24	"	.. ..	4,350	New York
24	Anglo-American Oil Co.	.. ..	66,360	..
25	"	.. M. Colza	20,000	Philadel.
25	"	.. Lub.	23,400	..
25	Mercantile Lighterage Co.	.. ..	1,200	New York
25	T. H. Lee	.. ..	280	Hamburg
25	Burt, Boulton and Heywood	.. Naph.	4,360	Ternauzen
25	Page, Son and East	.. Lub.	200	Antwerp
27	Schlieman's Oil Co.	.. ..	1,250	St. Petersburg
27	Argo Steamship Co.	.. ..	290	Bremen
27	T. H. Lee	.. ..	90	Hamburg
27	Lub. and Fuel Oils, Ltd.	.. ..	17,500	Marseilles
29	Schenker and Co.	.. ..	720	Antwerp
29	Page, Son and East	.. ..	40	..
29	Mordaunt Bros.	.. ..	9,600	Hamburg
29	G. W. Sheldon and Co.	.. ..	630	New York
29	Bowring Petroleum Co. (Beacon Light)	Lamp	1,041,310	Philadel.
	LIVERPOOL—			
23	J. Light and Son	.. Lub.	2,000	New York
23	Vacuum Oil Co.	.. ..	6,620	Philadel.
23	W. Gibson and Sons	.. Lamp	2,050	Boston
24	W. H. Nott and Co.	.. Lub.	300	Hamburg
24	Burnaby and Chantrell	.. Lub. Gr.	1,680	New York
25	Anglo-American Oil Co.	.. Lub.	522,910	Philadel.
	(August Korff)			
25	Cunard Steamship Co.	.. ..	6,800	New York
25	E. H. Kellogg and Co.	.. ..	1,000	..
25	Valvoline Oil Co.	.. ..	4,100	..
25	Worthington and Boler	.. ..	1,560	Philadel.
25	Meade-King, Robinson & Co.	.. ..	32,000	..
25	Crew, Levick and Co.	.. ..	13,540	..
26	American Line	.. ..	16,200	..
26	Vacuum Oil Co.	.. ..	4,800	..
26	Geo. B. Taylor	.. ..	48,800	..
26	"	.. ..	89,000	New York
27	Vacuum Oil Co.	.. Lub.	2,400	New York
27	W. B. Dick and Co.	.. ..	7,160	Philadel.
29	Anglo-American Oil Co. (Cuyahoga)	Lamp	637,600	..
29	"	.. Gas	282,190	..

DATE	PORT AND IMPORTERS	DESCRIPTION	NO. OF GALLS.	PORT WHENCE.
July				
29	Meade-King, Robinson & Co.	Lub.	4,800	Baltimore
29	"	.. ..	8,000	New York
29	W. B. Dick and Co.	.. ..	33,800	..
29	George B. Taylor	.. ..	53,720	..
29	E. H. Kellogg and Co.	.. ..	1,000	..
29	Valvoline Oil Co.	.. ..	8,200	..
29	American Express Co.	.. Lub. Gr.	200	Boston
29	Penwarden and Jackson	.. Lub.	120	Antwerp
29	Pickford's, Ltd.	.. ..	190	..
29	"	.. ..	750	Hamburg
	BRISTOL—			
23	Pickfords	.. ..	980	..
25	Anglo-Bosphorus Oil Co.	.. ..	240	..
25	Anglo-Russian Oil Co.	.. ..	440	..
25	J. C. Pinkerton and Co.	.. ..	150	..
26	Pickford's, Ltd.	.. ..	260	..
26	H. R. James and Sons	.. ..	1,000	New York
	GOOLE—			
25	Lanc. and York. Ry. Co.	.. ..	600	Antwerp
	GRIMSBY—			
25	J. Sutcliffe and Son	.. ..	560	..
25	"	.. ..	80	..
	HULL—			
23	Wilsons and N.E. Railway Shipping Co.	.. ..	160	Hamburg
23	"	.. ..	760	..
25	Hull and Neth. S.S. Co.	.. Tar oil	240	Rotterdam
25	British Pet. Co. (Suram)	.. Lamp	412,500	New York
25	Wilsons and N.E. Railway Shipping Co.	.. Lub.	4,530	Antwerp
25	"	.. ..	3,240	New York
27	"	.. ..	1,450	Hamburg
	MANCHESTER—			
23	G. B. Taylor	.. ..	480	..
25	Lampport and Holt	.. ..	1,820	New York
26	C. H. Morton and Sons	.. ..	800	Philadel.
27	Pickfords, Ltd.	.. ..	120	Hamburg
27	Geo. B. Taylor	.. ..	680	..
27	Anglo-American Oil Co. (August Korff)	.. ..	776,930	Philadel.
29	Liverpool Storage Co.	.. ..	12,000	New York
29	G. B. Taylor	.. ..	125,160	..
	NEWCASTLE—			
25	Tyne-Tees S.S. Co.	.. ..	1,920	Antwerp
	SOUTH SHIELDS—			
26	British Pet. Co. (Suram)	.. Lamp	489,600	New York
26	"	.. Gas	353,600	..
	ABERDEEN—			
29	R. Cannon, Reid and Co.	.. L. Paste	80	Hamburg
	GLASGOW—			
23	Clyde Shipping Co.	.. Lub.	800	Antwerp
26	J. and A. Allan	.. ..	32,270	Philadel.
	GRANGEMOUTH—			
25	J. Currie and Co.	.. ..	2,000	Hamburg
27	W. Graham-Yooll and Co.	.. Lamp	1,200	..
	LEITH—			
23	J. Currie and Co.	.. Lub.	930	..
25	W. Graham-Yooll and Co.	.. Lamp	1,830	..
25	J. Cormack and Co.	.. Lub.	5,800	Riga
27	Henderson and McIntosh	.. ..	76,360	Philadel.
	BELFAST—			
17/7	British Pet. Co. (Rocklight)	Lamp	780,890	New York
23	G. Heyn and Sons	.. Lub.	1,200	Riga
	CORK—			
23	Palgrave, Murphy and Co.	.. ..	1,020	Hamburg
	DUBLIN—			
25/6	Palgrave, Murphy and Co. (James Brand)	Gas	148,530	Philadel.
	Total for Week	8,120,950	
	Total for the Fortnight	11,878,210	

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVII. (New Series.)

AUGUST 17TH, 1907.

No. 405.

Editorial Notes.

The final arrangements have now been completed in connection with the holding of the Third International Petroleum Congress at Bucarest, and all that remains to make the gathering unprecedentedly successful is a large attendance of delegates interested in the petroleum industry in the four quarters of the world. That the attendance will be worthy of the occasion we do not for one moment doubt, for never before have we seen such interest aroused in the various countries by this International gathering. The final programme now published says much for the arrangements that have been made for the comfort and enjoyment of the delegates during their stay at Bucarest, and the educational excursions that have been arranged to Roumania's oil-fields are bound to be appreciated. The business side of the Congress is of a most International character, and the fact that so many authorities in the petroleum industry are coming forward to present papers upon subjects closely associated with the industry, and with which they are especially conversant, says much for the value of the coming conference.

It was a happy thought to hold the third International Petroleum Congress at Bucarest, for truly few oil producing countries have progressed of late years like Roumania, with its Government eminently friendly to the industry, and its exceedingly prolific petroliferous areas. Just at the present time in every district the greatest activity prevails, and we doubt not that the delegates from many of the foreign oil producing countries will have their eyes opened during the Congress excursions to the oil regions—opened to the real progress which is being achieved. The two past Congresses were held on occasions when there was much to attract in the respective cities of Paris and Liège, for in each case an Exposition was being held, but this is the first occasion upon which the gentlemen interested in the world's petroleum industry have been called together to hold an International gathering in the centre of an oil region which is fast coming to the front. The statistics which we give on another page are sufficient to shew the rapidity with which Roumania is taking her place among the largest of producing countries. During each of the first six months of this year the production has been between twenty and thirty thousand tons in excess of what it was for the corresponding period of last year, its advance this year as compared with last being about 37 per cent.

We are just beginning to recognise the vast importance of the shale deposits of Australia, and the more we hear of the great work carried out by the Commonwealth Oil Corporation, Ltd., in laying down the basis for their future gigantic undertaking in the Antipodes, the more we are impressed with its potentialities. The pioneer work which has been carried on for many months past, in what a few years ago was practically one of the worst of those almost impenetrable Australian jungles, has already been carried to success, and what is very gratifying to the shareholders is that not only have the shale beds been proved to be of enormous extent, but, as if to make the Corporation's success doubly certain, a rich seam of coal has been discovered which can be turned to very profitable account. Each successive statement by the company's general manager—Mr. D. A. Sutherland—is more satisfactory than the last, and of such good accounts the shareholders appear never to tire. Possibly that is why one gentleman at last week's meeting suggested the issuing of more frequent reports of progress. The directors may, or may not, see eye to eye with him, but in any case it is now safe to assume that the future has many good things in store for the Commonwealth Oil Corporation, Ltd.

The exports of petroleum from America during June, as will be seen from the tabular statement in another part of the current issue, shew a most gratifying increase over those of May, and though below the hundred million gallon mark, they constituted the largest recorded this year. The total value of the month's petroleum exports was \$7,378,000, which is an advance of about \$1,658,000 as compared with the preceding month, and \$470,000 upon the total value of the exports for June, 1906. With the publication of these June figures, the fiscal year is completed, and thus it is possible to compare the exports of 1906-7 with those of the fiscal year 1905-6. In all, the United States has exported during the past twelve months 1,140,850,991 gallons of petroleum products, these being valued at \$79,079,722, as against an export for the preceding twelve months of 1,189,667,142 gallons valued at \$80,442,000. It will thus be seen that the export trade has decreased both in amount and volume, the loss in volume being about 50,000,000 gallons.

Affairs in Galicia are gradually assuming a more favourable outlook. The Creditanstalt has terminated its financial agreement with the Petroleum Co., which comprised the majority of the crude oil producers, in order to compel the latter to combine on a different basis, this having already been attained. Immediately after the

Creditanstalt gave notice to terminate the agreement, the producers held a meeting at Vienna and resolved to continue to act in combination in the future. They also decided to adopt the following programme: (1) To ask the Galician Provincial Diet to construct storage tanks; (2) To ask the Central Government to grant cheap credit for the object; (3) To continue the negotiations with the Creditanstalt with a view to the construction of a large refinery. The producers' delegates then paid a visit to the Creditanstalt, where they were informed that the institution would be prepared to co-operate with them on the new basis. Representatives of the producers also presented themselves at Parliament and had interviews with the Prime Minister, the Minister of Finance, the Minister for Galicia, and the leaders of the Polish political party, all of whom received them very favourably, and promised their active support. The producers handed to all these eminent personages a memorandum setting out the condition and needs of the Galician petroleum industry. This memorandum contains much interesting information, which we hope to deal with fully in our next issue.

ROUMANIAN PETROLEUM EXPORTS DURING THE FIRST HALF OF 1907.

The *Moniteur du Petrole Roumain* has just published the statistics of the exports of petroleum products from Roumania during the first half of 1907, compared to the corresponding period of 1906 and 1905:—

	6 Months, 1907. Tons.	6 Months, 1906. Tons.	6 Months, 1905. Tons.
Crude oil, gas oil, distillate and lubricating oil ..	31,419	18,387	19,904
Illuminating oil ..	114,505	98,913	39,887
Benzine ..	49,136	34,016	26,045
Total ..	195,060	151,316	85,835

It will be observed that the Roumanian petroleum exports have this year continued to grow, and the total for the half is 30 per cent. larger than for the corresponding period of 1906. Considered separately, the three classes of products exported shew:—Crude oil, distillate, etc., an increase of 70 per cent.; illuminating oil, 16 per cent.; and benzine, 44 per cent.

The exports were distributed among the consuming countries as under:—

Destination	Crude, gas oil, distillate, and lub. oil. Tons.	Illumi- nating oil. Tons.	Benzine. Tons.	Total	
				6 Months, 1907. Tons.	6 Months, 1906. Tons.
France ..	1,906	31,944	27,973	61,823	50,550
England ..	11,227	31,517	2,902	45,646	29,787
Germany ..	504	12,768	17,326	30,598	24,427
India ..	—	15,063	—	15,063	—
Turkey ..	4,325	9,732	44	14,101	11,151
Austria-Hungary	10,238	—	245	10,483	7,259
Italy ..	2,431	2,022	477	4,930	12,835
Belgium ..	108	3,548	—	3,656	7,164
Egypt ..	—	3,467	—	3,467	—
Norway ..	—	2,478	—	2,478	3,435
Tunis ..	21	1,494	51	2,015	3,775
Other Countries	659	22	118	799	933
Total ..	31,419	114,505	49,136	195,060	151,316

UTILISATION OF OIL WELL GASES AT BAKU.

Some two months ago a gas engine made by Tangyes, Ltd., of Birmingham, was installed by the Caspian and Black Sea Society on their plot No. 38 at Ramany, and is now worked by the natural gases issuing from borehole No. 77, and used for baling this well. The engine is of 65 horse-power and of simple, but durable, construction.

The introduction of this engine marks a new era in the life of the Baku petroleum industry. Until now enormous quantities of natural gas issuing from the wells, and representing an inexhaustible source of motive power, were wasted, but now in view of the

successful results obtained by the Caspian and Black Sea Society it may be confidently expected that their example will be followed by other firms, and the utilisation of the natural gases will become general throughout the Baku oil fields.

It is interesting to note that the experiment now made by the Caspian and Black Sea Society is with a well where the gases are not visible at all to the eye, and upon analysis proved to contain only 20 per cent. of methane, which is a very poor gas indeed. This shews that natural gas can be utilised in almost any well producing oil, and the only question to be decided is the best system for feeding the motor.

The engine installed by the Caspian and Black Sea Society is fed with compressed gas of a pressure of about 10 pounds to the square inch. This is necessary owing to the very poor nature of the gas, but with richer gases it will be possible for the engine to draw the gas by suction direct from the borehole. The engine, which was given a difficult work—that of baling—performs its task in a very satisfactory manner.

The *Neftiannoie Dielo*, from whom the above particulars are obtained, promises to deal with this question at greater length in a future issue.

[We have already communicated with Messrs. Tangyes upon the subject, and hope to give additional details of this type of engine in our next issue.—ED. P.R.]

LONDON OIL SHARE MARKET.

FRIDAY, AUGUST 16TH, 1907.

The critical period through which the Stock Exchange has been passing affected all departments, indeed, the universal depreciation in value is almost without precedent. It is now confidently anticipated that the worst is over, and yesterday's rise in the Bank Rate to 4½ per cent. is merely regarded as a precautionary measure, which has on the whole been well received.

Under the adverse circumstances existing, the Oil Share group has been well maintained, although the more speculative Shares have naturally been a little affected, especially during the last day or two; however, we trust in the near future, with the general resumption of business, to see Oil Shares participate, for they certainly look very tempting at the exceptionally low prices now current.

The first alteration from our last figures occurred on the Thursday after the holidays, when Bibi-Eybats rose $\frac{1}{16}$, to $\frac{5}{16}$ — $\frac{7}{16}$, though Russian 6 per Cent. "B" Debentures were only 55-60. Nothing fresh occurred until the following Monday, when Californian 5 per Cent. Debentures were a point lower at 96-99, and on the following day some further weakness was discernible in this group, Californian Oilfields declining $\frac{1}{8}$ to 5½-5¾, while the Refineries were no better than 1-1¼. Shell Transport Ordinary were also slightly lower at 45s. to 46s., and next day a further shrinkage of 6d. took place at 44s. 6d. to 45s. 6d..

Some little selling took place on Wednesday, which resulted in the loss of 1s. in Russian Oil Ordinary at 4s. 6d. to 5s. 6d., and 1s. 6d. in Schibaieff Ordinary at 3s. to 4s.; but a little buying put up Shell Ordinary 6d. to 45s. to 46s. again.

At the Mid-August settlement, which commenced on Tuesday last, the account was remarkably light, and rates of interest were easy.

A comparison of making-up prices with those fixed at End-July shews a little irregularity; Baku Ordinary advancing 3d. at 3s. 6d., the Preference 9d. at 5s. 9d., and Russian Ordinary 6d. at 5s. 6d. On the other hand, Californian Ordinary at 5¼ have fallen $\frac{1}{8}$, Schibaieff 6d. at 4s. 6d., and Shell Transport Ordinary 2s. 9d. at 46s., Anglo-Russians at $\frac{1}{8}$, Russian Preference at 6s., Spies at 7s., and Schibaieff Preference at 1½ being without change. Latest quotations will be found on page 96.

THE COMMONWEALTH OIL CORPORATION, LIMITED.

THE COMPANY'S POSITION AND PROSPECTS—EXHAUSTIVE REPORT BY THE GENERAL MANAGER.

A special meeting of the shareholders of the Commonwealth Oil Corporation, Ltd., was held at the Westminster Palace Hotel, S.W., on Thursday, the 8th inst., in order that the company's consulting engineer and general manager—Mr. D. A. Sutherland—might present a report upon the progress and development of the company's business.

In the absence of Sir George Newnes, Bart., Mr. R. Leicester Harmsworth, M.P., took the chair, there being a large attendance.

The Chairman, in opening the proceedings, explained that the meeting was called solely for the purpose of hearing a report from Mr. Sutherland, the consulting engineer and general manager of the Commonwealth Oil Corporation, who had just returned to this country, after an absence of eight months in Australia superintending the work of the company. The speaker then made a few remarks bearing upon the company's

short cuttings made; but the real start was only made in December, and this has been since interrupted by two spells of holidays—Christmas and Easter—so that the work done only represents a little over six months. In this time the permanent way has been laid for the first 20 miles, and traffic commenced running over the rails. The longest tunnel has been completed and the shorter started. All the more difficult formation on the steep grades down into the valley has been well advanced. Given a continuance of good weather during the winter season now commenced, and the rails will be laid for the entire 32 miles by the end of September, and not more than ten weeks from now trains will be running over the whole line. The costs of clearing, cuttings, earthworks and tunnels have come well within the estimated figures, and the work done so far indicates that the period of completion and outlay will make the line a record in time and economy.



VIEW OF THE RAILWAY.

property, mentioning that already the first milestone to the company's success had been passed.

Mr. D. A. Sutherland, who was enthusiastically received, then said:—

Mr. Chairman, Ladies and Gentlemen,—I left England within a week of the general meeting on the 13th November, 1906, arriving in Australia at the beginning of 1907, and remaining there until June 25th last, arriving in England at the end of July—an absence of eight months from London.

The principal work in progress was that of the railway, of which I am able to report substantial advance. Further development of the mines at Wolgan and Capertee was also carried on, and a new bench of retorts was commenced at Torbane. A very large amount of my personal time was required in connection with the mines department in settling details of the leases, the terms of which had only been generally agreed. The negotiations were somewhat prolonged, and were only completed at the end of June. That everything has been carried out most satisfactorily the following brief summary will shew. At the time of my leaving England the railway had barely been commenced. The survey work had been advanced to enable the route to be decided upon, and sidings had been started at the junction with the Government railway, and the first

By the terms of the lease for the railway we have to expend at least £120,000 within a stated date, and it is clearly laid down that the line is for the paramount use of the Corporation. The district to be developed has no other known shale field of value or other valuable mineral, but the mines of the Corporation have already led to a settlement of some size, and when the works are completed there will be a fair amount of traffic, and the Government have in our lease granted us the right to fix the rates subject to a maximum and to the approval of the Chief Railway Commissioner. A further clause in our agreement with the Chief Commissioner provides for special rates should the Government desire to take over the line as part of their system. From 500 to 1,200 men have been regularly employed on the construction of the line and most of the rails and rolling stock have been purchased from the Government. A large number of sleepers were purchased, but by the erection of a sawmill great saving was effected by using the local timber. Full credit must be given to Mr. Deane for the design and construction of the railway. He has been most ably assisted by Mr. J. D. Simpson, the constructing engineer, who has had entire charge of the men and work. The work of Surveyors Marshall and Rhodes calls for special notice, the former having carried out the work of the difficult descent into the Wolgan

Valley. It was a great satisfaction for me to be able to ride on horse-back through the long tunnel and drive out on a locomotive for the twenty miles of constructed road with a heavy train load before leaving Australia. The whole staff may justly feel proud of the results already achieved.

Although the line will not be completely finished by October it should be possible to carry down the first instalment of plant for the Wolgan by then, so that work on the retorts and refineries can then be started, shale, coal and coke be transported, and the Corporation begin to realise on its immense resources of valuable minerals in this particular district.

The extended prospecting operations in the Wolgan Valley have proved conclusively that the quantities of shale available in this valley are sufficient for the present proposed works without taking into consideration the immense reserves in the Capertee Valley. Mining was confined to two points, and all other work in this valley suspended. The existing mine was still further developed, and a new one started at a parallel in order to ensure natural ventilation. I may say that from a cable which has been received, the mine has been carried forward very rapidly. It has already reached a length of 600 feet, coming into thicker shale than any of the other mines in the Wolgan Valley. A number of working faces have been opened up, so that by the end of this year a large output will be obtainable. No effort has so far been made to put out any large quantity of shale, but the quantity on the dumps in both valleys is not far short of 20,000 tons. This amount alone represents a large sum awaiting realisation. I may remind you here that we are only speaking of the Wolgan and Capertee. We have something like 30,000 tons of shale on all our dumps, which, of course, represents a very large sum of money. Further work on the Capertee side shewed the immense nature of the reserves which will be reached as the mines extend northerly, as the adit has been driven for nearly 3,400 feet, and shale averaging more than 4 feet in thickness and increasing southward to 4 feet 6 inches, all the shale being of first-class quality. The operations in this adit alone have proved several million tons of shale. Prospecting work has thus amply repaid its cost in the absolute proof of reserves of shales in addition to the reserves of coal.

Substantial proof has already been obtained of the existence of coal of good quality over a large area, but I was anxious to open it up by the means of shafts, and obtain such definite information as could be only proved by partial development. The completion of No. 1 coal shaft gave this, the drives and cross-cuts have shewn the coal bed to lie with great regularity and to be of uniform good quality. The drives in that mine are about 7 feet high by 9 feet wide. The coal is in all about 7 feet in thickness. The upper section of the coal is 2 feet 9 inches, of which at least 2 feet 3 inches is of exceptionally good quality, and owing to the natural conditions of the mine it is very easy to separate the sections. The miner can separate it and take it away with perfect ease; but we could better his work by means of coal-washing operations. The analyses shewed the coal to be of high quality for coking purposes, a considerable section giving only 5 per cent. of ash and 0.6 per cent. of sulphur, and the building of four coke ovens was therefore commenced at once in order to obtain 100 tons of coke for practical trial. The test of this coke will be made as early as possible, and if satisfactory as anticipated, the building of more ovens would enable us to enter into contracts, and I should in this event suggest at least 60 ovens in order to obtain an output of 1,000 tons a week by the end of the year. I may say that there are 2,000 tons of coal lying there. Mr. Sandford, of Sandford, Ltd., has undertaken to give us an order for this amount, viz., 1,000 tons per week for 26 weeks for use in the blast furnaces for the production of pig iron. The general manager of Great Cobar, Ltd., and other smelters have also made inquiries as to supplies. The hard coke of the quality we hope to supply with ash of 8 to 10 per cent., and sulphur contents 0.4 per cent. will be in great

demand. If our first product without appliances be 12 per cent. ash we will be more than satisfied, as we can improve it by the use of coal washing machinery. The local coke with which we have to compete contains no less than 17 to 18 per cent. of ash, so that the difference in our favour is most substantial, and should insure us preference before all present competitors. In order to deal satisfactorily with the large output of coal a fresh shaft was commenced, the original one being intended for prospecting purposes. Last year the board authorised the expenditure of a special sum of money upon development of coal, and although this outlay was not contemplated originally, it has been amply justified by the results, and is likely to give a handsome return.

The work done by prospecting and development has proved upwards of 20,000,000 tons of shale, and it is fair, from the evidence obtained on the Corporation's properties, to say that there is presumably 30,000,000 tons more.

In Mr. James Hardie, whom I appointed last year as mining superintendent over the whole of the Corporation's mines, we have an experienced and able man, who has formed the highest possible opinion of the enormous quantities of shale in sight. He could not be more enthusiastic in his hopes or more loyal in his desire to obtain the best possible results. The work of the mine manager at Wolgan, Mr. Barbour, also calls for notice as it has been carried out in a most substantial manner and there probably is not a harder working man on the staff. The work of Mr. Hutton, the mine manager at Torbane, has also been most conscientiously carried out.

Sites have now been definitely selected for the proposed bench of retorts and refineries and other contemplated works, so that immediately on the railway reaching the mines operations can be commenced for the construction of the works. It is proposed to make bricks for building purposes and fire bricks on the spot, and work has now been commenced in this direction. A suitable position has been selected for the Corporation's township, the planning out of which has been commenced.

The magnitude of the enterprise of this Corporation is now beginning to be thoroughly understood in Australia, and an official visit paid by the Under Secretary for Mines satisfied the authorities in Sydney of the immense developments being carried out. The Premier on more than one occasion has referred publicly to the support for which we may look from the Government, and I am glad to be able to congratulate the directors on the settlement of all questions in connection with the mining, surface and other leases.

The results of the twelve months working to March 31st of this year of the New South Wales Shale and Oil Co. having given a satisfactory and profitable return, may be taken as proved that this purchase effected last year will be covered in three years. A re-valuation of plant carried out independently and with more time than I had at my disposal originally has shewn that the buildings, plant and machinery freehold land and other assets are in themselves fully equal to the purchase price without taking into consideration the goodwill or full value of the shale field. As approved by the board a new bench of retorts at Torbane to replace the old ones, which were ignored in the valuation, is being constructed, and should pay for itself in a very short time. It is expected that this bench will be working before the end of the year. Mr. Hall is in charge of this section of the company's work, and the results achieved are a testimony to his ability. Mr. Land, formerly secretary to this company, has acted with marked success as local secretary to the Corporation since the beginning of the year. Messrs. Starkey and Starkey, the local representatives of our London auditors, deserve special mention for their unremitting and close attention to the checking of all our accounts. I can congratulate the shareholders on possessing such a loyal and hard-working staff, both here and in Australia.

The tendency for all prices for oil in Australia is to rise, and kerosene oil is already more than 3d. per gallon over the price at which I assumed it in my calculations of profits, and other prices have advanced correspond-

ingly. A large demand for oils exists, and a report from an experienced oil distributor has indicated that we should be able to effect large sales as soon as we can place refined oil upon the market. Now that the railway has been completed every effort will be made to push forward with the construction of the works in order to get our products on the market. While, as the chairman has indicated, it is impossible for me to give you even a brief description of all that has been accomplished, I wish to say, in the strongest possible way, that I have nothing but satisfactory news to give you, and that the condition of the properties could not be more satisfactory or the prospects before the Corporation brighter.

The general conclusions which I have arrived at during my recent residence in Australia are as follow:—The developments in the shale mine during the past year have exposed still further large reserves of shale. It may be taken that not less than 20,000,000 tons of shale have been proven, while the presumable shale will amount to between 20 or 30 million more tons. In other words there are reserves for 150 years' work at the rate that was originally intended. The development of the coal mines has definitely proved the occurrence of large quantities of coal, also running into millions of tons, and that a large section of the coal is coking coal of high quality. The railway over which trains are running for more than half the distance will be completed to enable trains to be run over the entire distance by the commencement of October. The working of the New South Wales Shale and Oil Co. for the first 12 months has proved the profitable nature of the undertaking even without the production of illuminating and lubricating oil and other by-products. The assumed costs of working are amply verified by practical work we have carried out; the condition of the markets is better than ever, there being a greatly increased demand at much higher prices for all the products and by-products the Corporation will produce.

General Pryor asked if he was right in presuming that all the oil was extracted at the mine itself.

Mr. Sutherland: It will be. Of course, we have not yet got the railway there, but we are extracting it at the old mines that we have acquired, and in future we shall extract it from the new mines right on the spot, and refine it and carry it to Sydney in bulk.

A Shareholder: Do you ship much shale?

Mr. Sutherland: We shipped 5,000 tons of shale this year. We sold for delivery in Europe, and we will be only too glad to ship as much of the shale as people will give us orders for. I believe the market in export shale has only been a restricted one, because people have not been able to obtain guarantees of large quantities of shale. We can guarantee the delivery of 20,000 or 30,000 tons of shale as fast as we can possibly get it down by the railway after the beginning of October.

Mr. Mackay: Is it intended to have a refinery in Sydney?

Mr. Sutherland: I have gone very carefully into that matter, and I have found that it would be cheaper to produce the refined products in the Wolgan Valley, and to carry the refined products in bulk—that is to say, in tank waggons—to Sydney, and there case and barrel the products or make our candles, or do anything of that kind and distribute it.

A Shareholder asked if Mr. Sutherland could say anything as to the value of the by-products.

Mr. Sutherland replied that the by-product which they looked for in distilling the shale was sulphate of ammonia, and that was worth about 1d. per pound. In the course of their experiments they got from 30 lb. to 40 lb. per ton; so that should they get anything from 3s. to 3s. 4d. per ton. The cost of distillation was somewhere about 1s. per ton; so that he had at least 2s. to spare for mining costs.

Sir William Ramsay, K.C.B., F.R.S.: In the coking ovens I presume you will also get sulphate of ammonia.

Mr. Sutherland said he did not propose to do that at present, for they had to feel their way at first, but as soon as they were selling 1,000 tons per week they would

go in for coking ovens, and obtain the by-products and get the most they could from their coal.

Mr. Brownfield proposed a vote of thanks to Mr. Sutherland for the valuable information which he had given to the shareholders, and for the favourable report which he had presented upon the company's property. He thought that the Corporation ought soon to reach the dividend-paying stage.

Mr. E. A. Baker, in seconding the motion, said he happened to be visiting Sydney last January, and, being a shareholder in the company, Mr. Sutherland gave him permission to see the properties, and a very instructive visit it proved to be. He would take that opportunity of tendering his hearty thanks to the managers and the staff, who shewed him every consideration and gave him every information. The opinion he formed of the property was a very favourable one, and from what he had heard from Mr. Sutherland he was perfectly certain that the directors, following the policy laid down by Mr. Sutherland, were slowly, but surely, laying the foundations of what one day would be a very great industry in Australia. He had felt a certain amount of dissatisfaction in connection with the delay of the railway, but, having now ridden over it, he was quite able to realise the great engineering difficulties that had been overcome by Mr. Sutherland and his assistants in connection with the construction, and, altogether, he thought the shareholders ought to be very gratified with the work that had been done.

The motion was passed with acclamation.

Mr. Sutherland, in responding, said he would be glad to give the shareholders any information they desired of their property. Two years ago, when he undertook the work, he had said it was the most fascinating work of his life, and he could only repeat that statement now. At the same time he felt that this vote of thanks was not only due to him, but to all those who had been working so heartily and loyally for the Corporation in New South Wales. He could assure the shareholders that there was not a member of the staff who did not thoroughly agree with the great prospects of the Corporation.

Sir Robert L. Lucas-Tooth, Bart., proposed a vote of thanks to the chairman. He remarked that those who had had any experience of forming new companies knew the arduous task that directors undertook, and the difficulties were far greater when the operations were carried on at such a great distance from England.

The motion was cordially adopted.

The Chairman, in acknowledging the compliment, said that Sir Robert Lucas-Tooth, who was the chairman of the Bank of New South Wales, was one of the greatest authorities on Australian enterprise.

The proceedings then terminated.

THE MOSCOW-CAUCASIAN PETROLEUM COMPANY.

We have received the balance sheet and accounts of the Moscow-Caucasian Co. for 1906. This company, which has had the good fortune to secure the concession of the drained Ramany lake, is now the most prosperous petroleum producing enterprise at Baku.

Their gross profit earned by the working of their oil fields in 1906 amounted to 2,638,641 roubles, which is more than satisfactory, bearing in mind that the total share capital is only 4,500,000 roubles. After deducting off 569,865 roubles for depreciation and 372,879 roubles for Government income tax, there is left a net profit of 1,695,745 roubles. Out of this sum 84,794 roubles is written off for statutory reserve; directors' remuneration, 125,110 roubles; extra remuneration and relief to employees, 125,110 roubles; 900,000 roubles is distributed as a 20 per cent. dividend to the shareholders, whilst 495,252 roubles is used for creating a special reserve fund.

At a meeting of the shareholders held on June 8th the report and balance sheet were adopted and a dividend of 20 per cent. declared. Messrs. P. O. Gukasoff and A. L. Loneff were elected directors of the company.

The Petroleum Trade of the Ports of Batoum and Novorossisk.

STATISTICS FOR THE FIRST HALF OF 1907.

The following statistical figures shew the turnover of petroleum production in the first half of 1907 at Batoum and Novorossisk, the export ports of the Russian petroleum industry.

Batoum, which is the port of shipment for Baku products only, has in the first half of 1907 received the following quantities of various petroleum products from Baku :—

	Six Months, 1907. Poods.	Six Months, 1906. Poods.
Refined Kerosene	16,705,495	10,607,431
Kerosene Distillate	3,219	—
Light Solar Oil	270,126	695,244
Pyronaphtha, Astraline, etc. ..	2,113	—
Machine Oil	2,869,361	2,982,969
Machine Oil Distillate	762	88,103
Spindle Oil	439,428	424,550
Cylinder Oil	126,434	66,988
Sabonaphtha, Vaseline, etc. ..	578	—
Residuals	1,170,192	839,457
Crude Oil	109,956	66,013
Benzine	661	—
Total	21,698,325	15,770,755

These figures of arrivals shew the activity which has prevailed during the first half of the year in order to bring the trade up to its usual level.

The stocks of oils at Batoum on the 1st July this year, compared with those at the corresponding time last year were (in poods) :—

	Stocks on 1st July, 1907.	Stocks on 1st July, 1906.
Refined Kerosene	4,806,346	2,369,200
Kerosene Distillate	47,132	23,250
Light Solar Oil	334,708	758,451
Machine Oil	808,226	507,400
Machine Oil Distillate	13,540	25,706
Spindle Oil	116,597	49,550
Cylinder Oil	46,154	23,937
Heavy Solar Oil	—	—
Sabonaphtha, Vaseline, etc. ..	—	37,100
Residuals	353,053	424,700
Crude Oil	—	—
Goodron	6,120	—
Total	6,531,876	4,219,294

The shipments of various products from Batoum to Russian ports and abroad during the half-year were :—

	To Russian Ports.		Abroad.		Total.	
	Six Months, 1907.	Six Months, 1906.	Six Months, 1907.	Six Months, 1906.	Six Months, 1907.	Six Months, 1906.
Refined Kerosene	2,129,092	1,442,122	13,815,556	8,814,887	15,944,648	10,257,009
Kerosene Distillate	—	—	704,788	—	704,788	—
Light Solar Oil	6,015	13,449	344,838	857,800	350,853	871,249
Pyronaphtha, Astraline, etc. ..	5,303	3,903	—	—	5,303	3,903
Machine Oil	94,230	135,681	3,029,279	2,732,554	3,123,509	2,831,226
Machine Oil Distillate	—	98,672	89,026	189,142	89,026	189,492
Spindle Oil	19,151	11,300	472,918	421,079	492,069	438,379
Cylinder Oil	1,800	12,277	92,901	54,777	94,701	67,054
Heavy Solar Oil	4,996	12,563	—	—	4,996	11,737
Sabonaphtha, Vaseline, etc. ..	201	869	—	20,116	201	21,811
Residuals	47	621	874,297	622,054	874,344	622,675
Crude Oil	—	—	—	31,280	—	31,280
Benzine	—	—	780	—	780	—
Goodron, etc.	—	647	3,260	—	3,260	647
Total	2,260,835	1,596,423	19,427,643	13,744,295	21,688,478	15,340,718

The arrivals of petroleum products at Novorossisk from Baku and Grosny during the first half of 1907 were :—

	From Baku.		From Grosny.		Total.	
	Six Months, 1907.	Six Months, 1906.	Six Months, 1907.	Six Months, 1906.	Six Months, 1907.	Six Months, 1906.
Refined Kerosene	198,730	1,170,660	394,963	926,374	593,693	2,017,034
Crude Oil	69,788	97,547	1,736,729	862,324	1,806,517	959,871
Residuals	25,963	301,187	—	155,997	25,963	457,184
Benzine	—	—	1,048,340	21,591	1,048,340	21,591
Ligroin	—	—	24,180	155,043	24,180	155,043
Total	294,481	1,569,394	3,204,212	2,121,329	3,498,693	3,690,723

The shipments of various products from Novorossisk during the half-year were as under :—

	To Russian Ports.		Abroad.		Total.	
	Six Months, 1907.	Six Months, 1906.	Six Months, 1907.	Six Months, 1906.	Six Months, 1907.	Six Months, 1906.
Refined Kerosene	695,468	261,919	714,051	1,631,646	1,409,519	1,955,565
Solar Oil	—	—	—	145,510	—	145,510
Residuals	1,169,089	819,672	—	398,654	1,169,089	1,218,326
Benzine	2,190	868	977,718	—	979,908	868
Ligroin	—	—	—	162,376	—	162,376
Goodron	166	1,170	—	—	166	1,170
Total	1,866,913	1,083,629	1,691,769	2,400,186	3,558,682	3,483,815

It will be observed from the above that, although a considerable quantity of Grosny crude oil is delivered to Novorossisk, there is none shipped from that port either to home or foreign markets. This is explained by the fact that this crude oil is treated at the Novorossisk refinery of the Standard Russe Co., and turned into various products.

The total exports of petroleum products from the two ports during the first half of 1907, as compared with those for the corresponding period of the preceding year, were as under :—

	Six Months, 1907. Poods.	Six Months, 1906. Poods.
Refined Kerosene	14,529,607	10,446,533
Kerosene Distillate	704,788	—
Light Solar Oil	344,838	1,003,310
Machine Oil	3,029,279	2,732,554
Machine Oil Distillate	89,026	189,148
Spindle Oil	472,918	421,079
Cylinder Oil	92,901	54,777
Sabonaphtha, Vaseline, etc. ..	—	20,116
Residuals	874,297	1,020,708
Crude Oil	—	31,280
Benzine	978,498	—
Ligroin	—	162,376
Goodron, etc.	3,260	—
Total	21,119,412	16,144,481

THE PETROLEUM FIELDS OF SANTA BARBARA.

ANOTHER GOVERNMENT SURVEY.

(Concluded from page 73.)

Hartnell-Brookshire Area.

The area comprising the southern portion of the Hartnell tract and Brookshire property and the south-eastern portion of the Radium lease is located on or adjacent to and in the broad valley south of the ridge running north-westward from a point near the west end of Graciosa Ridge. The major structural feature is a north-westward-plunging anticline which is here called the "Hartnell." There is both surface and underground evidence of its presence, but its exact location is, of course, only conjectural.

The first oil zone (A) occurs about 400 feet above zone 3, is struck at depths from 2,150 feet down, and is said to vary from two to five feet in thickness. From an examination of the material from this and the underlying productive zones it is thought that the oil must come from the joint cracks or interstices between the fragments of more or less fractured shale, as no true sand of sufficient coarseness to allow the rapid transmission of oil has been encountered in the productive zones in the wells of this group. Between the first zone and the one that has been recognised as the second, or B, are one or more productive zones 2 to 15 feet in thickness. No two wells shew the same sequence of these zones, and they probably represent places of local fracturing.

The second oil zone (B) is thought to be fairly constant throughout the area. It consists of alternating barren and productive layers of shale, some of the productive layers being from a few feet to as much as 20 feet in thickness. Below the main or upper part of this zone are others, some at least 200 feet below B. The oil-bearing measures in these zones, as in A, are probably nothing more or less than fractured portions of the shale.

The oil from the wells in this area runs from 24° to 26° B., and is dark brown in colour, with the exception of that from one of the wells, which is said to be a reddish emulsion of oil and water. All the wells shew much gas, the best producers being under heavy pressure.

The production of the individual wells in this group varies from an initial output of 12,000 barrels in one well to a daily average of 150 barrels in another.

Graciosa-Western Union Area.

The wells at the north-east corner of the Graciosa and north-west corner of the Western Union properties are located on the point of the ridge which runs southward for more than a mile from the main Graciosa Ridge. The structure is apparently simple, being the south-western flank of the hypothetical Newlove anticline. At least two minor folds occur on this flank, one apparently passing through Western Union wells Nos. 21 and 22, and the other occurring from three-eighths to five-eighths of a mile north-west of the first.

The first oil zone (zone B of the northern part of the field) is reported from only one well. It is nearly 200 feet thick, and is encountered at a depth of about 2,075 feet. Gas is associated with the oil in this zone.

The second and important oil zone of this area (C) is struck at depths of 2,670 feet or more, and lies about 600 feet lower in the wells than zone B, which is apparently unproductive in most of the wells. According to the data in hand, the productive zone varies in thickness from 18 to about 240 feet, and consists of alternating light and dark-coloured flinty shales interbedded with varying amounts of sandy shale. No true sand, as ordinarily implied by the name, occurs in the productive zone of this area, so far as the writers were able to learn.

The oil from zone C runs from 25° to 27° B., averaging well up between 26 degrees and 27 degrees, and has a brownish colour. It comes from the wells at a temperature of about 25° F., and is usually accompanied by much gas. Some of the wells, however, are said to shew a comparatively low gas pressure.

The production of the individual wells varies from 300 to 3,000 barrels per day, the flow often being unusually strong. None of the wells have been allowed to produce up to their full capacity, owing to the lack of storage and transportation facilities, so that even had they been down long enough for a thorough test (which is hardly the case, since nearly all have been finished since 1904), no definite conclusions could be drawn concerning their lasting properties.

Eastern Group of Western Union Wells.

The eastern wells of the Western Union Co. are located near the head of one of the branches of the broad valley which extends east north-westward from Harris Canyon at Blake and are about five miles south-east of Orcutt. They are from one-half to three-fourths of a mile east of the west property line of the company and close to the northern line. Slightly more than half a mile north-east of the wells is the axis of the Mount Solomon anticline, from the south-western flank of which the wells derive their oil.

The first oil is struck at a depth of 1,200 feet down, and varies in thickness from 12 to 75 feet, although in some of the wells sands are encountered at intervals for at least 250 feet below the top of the first sand. The oil sand is for the most part rather fine grained, and is accompanied both above and below by shale, and in a few places by shell. In some of the wells the oil zone appears to be a practically continuous sand for its entire thickness; in others, alternating sand and shale layers furnish the oil.

A second oil zone occurs about 1,200 feet below the first, the entire distance between the two being occupied by shale, with a few hard "shell" layers. Very little occurs at this horizon.

A third oil zone about 150 feet thick is penetrated at a

considerable depth below the second, the formation between the second and third horizons being practically all shale. Comparatively little oil was obtained from this zone, although it is thought to be the same as the one which is so productive in the Graciosa-Western Union area, only half-a-mile to the west. This may be accounted for by the general synclinal position of the eastern group between the Mount Solomon and the hypothetical Newlove anticlines.

The oil in the first productive zone has an average gravity of about 19° B., and is very dark coloured. Gas is associated with the oil, but no water has so far been reported from any of the wells.

The production of the wells in this group varies from five to over 150 barrels per day. The yield of some of the wells is fairly constant, shewing only a small decrease in average daily output over a considerable number of months; in others, however, the yield is fluctuating.

Lompoc Field.

The developed territory within the Lompoc field, on which the following discussion is based, lies on the flanks of the Purisima Hills, between the Cebada Canyon and Santa Lucia Canyon roads. Within it are located the Logan well of the Los Alamos Oil and Development Co.; the Hill, Wise and Denigan, and Eefson wells of the Union Oil Co., and the abandoned wells of the Todos Santos Coast Line, and Barca oil companies.

The principal productive oil zone in the region under discussion is struck at depths below the surface ranging from more than 2,000 feet down. In nearly all the wells the productive strata are overlain by limy "shell" layers, which apparently act as barriers to the upward migration of the oil at the present time. The beds beneath these limy "shells" are true sands in most places, although in some of the wells these sands are interstratified with various qualities of shale and limestone "shells." The thickness of the oil-yielding zone varies from about 160 to 700 feet, and in one well a productive series of sands, shales and "shells" is said to be penetrated for a depth of 1,100 feet. Either water sand, dry oil sand or limy "shell" usually defines the base of the productive zone.

Two grades of oil are struck in this field—one a black oil, with a gravity of 18 to 24 degrees, the other a brown to greenish oil of about 35° B. The black oil is produced by most of the wells, the lighter variety coming only from the Logan well of the Los Alamos Oil and Development Co., and one other well in the Wise and Denigan lease of the Union Oil Co. One of the wells yields an emulsion of water and 20 degrees oil, which is reddish brown in colour as it comes from the well. The oil turns to the usual black colour on separation of the water by settling.

The production of the individual wells varies from 100 to 1,000 barrels per day, the best producers averaging from 300 to 500 barrels. One of the wells, which gave an initial output of 200 to 300 barrels, suddenly began flowing 1,000 barrels a day. This continued for a few days, and then gradually fell off to 300 barrels, which it

is still yielding. It is said that the wells, as a rule, are exceptionally steady producers, falling off but little in the two years since the field was first opened. Very few of the wells have been tried to their full capacity, so that it is probable that yields greater than those mentioned will be recorded when the field is fully tested.

Arroyo Grande Field.

Drilling has recently shewn that at least certain portions of the region north and north-west of Arroyo Grande, San Luis Obispo county, a short distance north of the area mapped in Pl. I., are underlain by productive oil formations. The successful wells belong to the Tiber Oil Co., and are located on the western side of Price Canyon, about three miles north-east of Pismo and seven miles slightly east of south of San Luis Obispo. Although outside of the immediate area covered by this report, the occurrence is so important in shewing an extension of the Santa Maria district toward the north-west as to merit mention here.

The oil is derived from a great thickness of productive sands, which probably represent the base of the Pismo, and which rest on the upturned and more or less contorted shale of the Monterey. Its occurrence in a syncline is worthy of note, as ordinarily synclines are not highly productive. The Monterey is the oil-bearing formation in the Santa Maria district, and it is the ultimate source of the oil in this field also. The migration of the oil probably took place along the joint cracks in the shale, as was the case with the asphaltum in the Santa Maria and other fields. The oil on reaching the upper limit of the shale passed across the plane of unconformity and accumulated beneath an impervious shale in the porous sand at the base of the Pismo. Where this porous layer approaches the surface the more volatile parts of the oil have escaped, and there remains nothing but the bitumen, while the more deeply covered sand retains the oil in its lighter and liquid state. The migration of the oil, as in every similar case coming under the notice of the writers, has been accompanied by a loss of its volatile constituents and a consequent lowering of the gravity. This is shewn by the fact that while the gravity of the oil from the Monterey shale in the Santa Maria field averages about 25 degrees, that from the Pismo formation in the Arroyo Grande field is only 14 degrees.

It seems almost certain that considerable portions of the Pismo formation toward the middle of the area north-west and north of Arroyo Grande will be found to be oil producing. This conclusion is based on the assumption that the Pismo of this region is underlain by the oil-yielding Monterey. The surface evidence of such a condition is most conclusive.

PRODUCTION OF DUTCH INDIAN COMPANIES.

The production of refined illuminating oil by the Dordtsche Petroleum Co. of Java, in July, amounted to 187,000 cases. Since the beginning of 1907 the company has produced 1,143,000 cases.

The production of crude oil by the Tarakan Petroleum Co., in June, amounted to 1,150 tons.

The Romney and Tilbury Oil Fields of Canada.

Our excellent contemporary the *Oil, Paint and Drug Reporter* publishes an interesting extract from a report recently prepared by Mr. Eugene Coste upon the oil districts of Canada.

Beginning with the "first strike" of oil in Tilbury in December, 1905, the second in March, 1906, and the third in April, 1906, followed by 103 others to date, Mr. Coste reasons that the good oil territory of Tilbury extends at least over an area of two miles east and west by five miles north and south, with the latter limits still unknown. Only three or four dry miles have so far been encountered in that large area of 6,400 acres, and a number of very good century wells have been struck. "The largest of these," says Mr. Coste, "is the A. Seward well of the Central Oil and Gas Co., which started to flow without being shot, at the rate of 1,500 barrels per day of fluid, 1,200 barrels of which were salt water, and 300 oil. This well is now over two months old, and is still flowing naturally about 200 barrels of salt water and 50 barrels of oil per day. The oil, water, and gas were all struck at the same time at a depth of 1,445 feet."

Mr. Coste, in describing the Tilbury oil, says it contains some sulphur, which gives it a strong odour peculiar to the crude oil known in the States as Lima oil. It is dark green in colour, of 38° to 41° B. gravity, and belongs to the same class as the Lima, Ohio, and Indiana, and the Petroleum and Oil Springs oils. The oil field, he says, lies under a flat drift-covered section of the country, the elevation of which is about 600 feet above the sea. The drift is about 150 feet thick in the south end of the fields and about 100 feet to the north end, and is composed of boulden clay on the top and sands and gravels varying much in thickness below.

"At present," continued Mr. Coste, "the Tilbury oil is bought only by the Imperial Oil Co., of Sarnia. This company has established a pumping station and tank in a central part of the field, from which it pumps the oil through a four-inch, and also through a two-inch line, owned by them, to Merlin on the Pere Marquette Road, four and a-half miles distant. From there the oil is taken over that road in tank cars of the Imperial Oil Co. at the tanks at each well, and they pay at present for it \$1.14 per barrel. After the oil has been accepted and the tank has been gauged, the oil is run by means of a donkey pump through two-inch lines owned by the Imperial Oil Co. to their tanks erected at the Central Station. The well tank is again gauged after the run and the difference in the two gauges gives the amount of oil sold for which the Imperial Oil Co. gives the producer a run ticket and also a voucher ticket in order to enable him to get the bounty of 52½ cents per barrel. The total price, therefore, obtained at present by the producer for his oil is \$1.66½ per barrel, less the royalty, generally one-eighth to the owner of the land, the oil and gas rights of which are generally only leased by the producers. Two years ago before the Canadian Government removed the import duty protecting Canadian crude oil, the average

price of it in Canada was \$2.12. By the bounty system, therefore, minus the duty system, the net result is a loss to the oil producer of \$2.12, less \$1.66½, or 45½ cents a barrel, while the refining companies make all the gain, which I am not aware that they share with the consumer. With the duty removed they can obtain their crude oil cheaper from the States, so much so that the Canadian Oil Co., the only independent refiner now in Canada, gets all its supply of crude oil from Ohio, and I believe, buys no Canadian oil from any of the fields, certainly none from the Tilbury field.

"The price of Canadian oil," Mr. Coste continued, "is therefore governed and controlled by the American market, when the Canadian producer, operating in the deep fields, is at a disadvantage in being called on to pay a heavy duty on his drilling outfits, machinery, cordage, tubing, lead lines, etc. The oil in the Tilbury field is in deep sand, about 1,400 feet, and consequently all the drilling done there is done by the American cable tool system, the Canadian pole tool system being too slow and not suitable for wells of that depth. These American cable tool outfits cannot be obtained in Canada, nor can the 1,500-pound test two-inch tubing, and other two-inch high pressure lines which the Tilbury field producer must have, and on all of these he must pay a heavy import duty.

"It is quite clear, therefore," says Mr. Coste, "that the Canadian deep oil producer could receive greater encouragement to test and develop deep oils in Canada if he had no duty to pay on his materials, which he necessarily imports from the States, and if the price of his product was protected by an import duty on American crude oil, instead of, as at present, receiving a bounty on his product from the Dominion Government, which he practically returns in the form of duty on his equipment, while at the same time his price is slaughtered in competition with the cheap American crude oil."

Mr. Coste speaks of the Romney field as "a pool," as it is yet only three-quarters of a mile long and only a few hundred feet wide. He adds: "It is only a few months old, and there are now seven producing wells on it, several of which came in as very large wells, making each over 1,000 barrels per day of oil. The oil is struck at the shallow depths of 200 to 270 feet. The oil is heavier than the oil of the Tilbury field, about 28° to 30° B. It is piped and shipped from Coalsworth station to the Sarnia refinery of the Imperial Oil Co., which now pays 6 cents per barrel for it at the wells.

Five miles further south-west again, in lot 11 of the second concession of Romney, oil was struck some few years ago in the Guelph formation, at 1,290 feet. The wells were pumped for a while, but abandoned on account of their making too much salt water with the oil.

It will be seen from the facts presented, says the writer, that a great many other interesting oil and gas developments are to be anticipated from this district, and not only from parts of the county of Kent, but also from points in the neighbouring counties.

ACTIVITY IN ROUMANIAN PETROLEUM PRODUCTION.

STATISTICS FOR THE FIRST HALF OF 1907.

The provisional figures for June, published elsewhere, enable us to make up the total production of crude oil in Roumania in the first half of 1907. The following is a comparison of the production, month by month, in the first six months of 1907 compared with the corresponding months of 1906:—

	Six Months, 1907.	Six Months, 1906.
January	83,281	58,219
February	87,786	55,650
March	98,330	67,464
April	97,412	75,235
May	98,000	76,061
June	91,191	71,729
Total	558,000	404,358

The above figures shew that in the first half of 1907 the production has increased against the first half of 1906 by more than 150,000 tons, or 27 per cent.

The production of the leading firms in the first half of the year was as under:—

	Six Months, 1907.	Six Months, 1906.
Steaua Romana	187,216	128,188
Regatul Roman	102,083	41,623
Bustenari	66,196	65,330
Romano-American Co. ..	40,000	17,344
Telega Oil Co.	24,262	31,366
International Co.	21,477	19,854
Trajan Co.	20,596	4,550
Columbia Co.	14,454	5,629
C. M. Pleyte	14,078	17,344
Aquila Franco-Romana ..	8,172	6,290

The figures for 1907 for the Romano-American Co. is merely approximate.

JULY OPERATIONS IN THE MID-CONTINENT FIELDS.

As we go to press details reach us of the operations in the Mid-Continent fields of America during July. During the month no less than 423 wells were drilled as compared with 426 during June. This slight falling off is due to the very hot weather prevailing, which on many days registered 120° upon the open fields. As a general rule the wells in the Mid-Continent fields are holding up exceptionally well, while the new completions shew that the territory struck is fairly prolific. The average of the wells during July was over 80 barrels each, this figure being above the June average. The production of the new wells was about 28,000 barrels. Toward the end of the month there was a slight falling off in drilling, though all operators are looking to the future with perfect confidence now that an adequate outlet will be found by way of the Gulf of Mexico for the greater portion of the production.

BATOU M PETROLEUM SHIPMENTS.

The following were the quantities of petroleum products shipped from Batou m during the week ended July 21st, 1907, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1906.	1907.	1906.	1907.
To Europe	—	—	21,000	1,000
To the East	12,000	145,000	—	2,000
To Russian Ports. . .	—	6,000	—	—
From 1st Jan. to 21st July:—				
To Europe	8,358,000	10,069,000	4,511,000	5,839,000
To the East	2,506,000	6,632,000	32,000	117,000
To Russian Ports .. .	1,932,000	1,339,000	136,000	108,000

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING JULY.

THE SHIPMENTS INTO VARIOUS PORTS.

The following table gives the details of the various shipments of petroleum products into the ports of the United Kingdom during the month of July. The figures constitute a record, being the highest yet recorded

during any month of the present year, Both illuminating and lubricating oils have been received in large quantities during the month, and practically one-half of the total products found their way to London.

	Lubricating.	Illuminating.	Residuals.	Benzine.	Other Products	Fuel.	Gas.
Aberdeen	340	—	—	—	—	—	—
Barrow	—	—	—	1,035,680	—	—	—
Belfast	2,125	1,830,890	—	—	—	—	—
Bristol.. .. .	69,200	916,080	—	—	3,400	—	—
Cardiff.. .. .	24,000	—	—	—	—	—	—
Cork	1,020	—	—	—	—	—	—
Dublin	—	387,300	—	—	—	—	148,530
Glasgow	218,200	—	—	—	23,800	—	—
Gloucester	2,000	—	—	—	—	—	—
Goole	1,500	—	—	—	—	—	—
Grangemouth	24,040	6,760	—	—	400	—	—
Grimsby	3,170	—	—	—	23,000	—	—
Hull	88 330	1,275,950	131,020	32,000	9,900	—	—
Leith	107,510	6,190	—	—	—	—	—
Limerick	—	244,000	—	—	—	—	—
Liverpool	1,704,590	641,700	—	—	10,650	—	282,190
London	1,197,565	6,271,170	—	1,730,860	1,436,850	—	2,898,200
Manchester	1,345,555	4,141,080	—	—	4,400	—	—
Middlesboro'	2,240	—	—	—	—	—	—
Newcastle	16,960	—	—	—	1,500	—	—
Plymouth	250	—	—	—	—	—	—
Southampton.. .. .	780	—	—	—	—	—	—
South Shields	—	489,600	—	—	—	—	353,600
Totals.. .. .	4,809,375	16,190,720	131,020	2,798,540	1,513,900	—	3,682,520

NOTES FROM ALL QUARTERS.

RUSSIA.

Bibi-Eybat Strike.—The men of the Bibi-Eybat Petroleum Co., Ltd., came out on strike at Bebe-Aibat on the 9th of August.

A Saboontchi Spouter.—A telegram from Baku, dated the 6th of August, announces that a spouter has been flowing on the Ter Akopoff Company's property at Saboontchi since 10 p.m. on the 5th August.

The Export Rate Again.—The question of lowering the railway rate for export kerosene on the Baku-Batoum line, which has been under discussion by the Tariff Committee, has now passed to the Tariff Council of the Russian railways for final decision.

The Akhverdoff Co. in 1906 earned a gross profit of 1,453,631 roubles, and after allowance for depreciation, reserve, etc., there is left a net profit of 890,332 roubles. Out of this a sum of 425,200 roubles was paid out as dividend to the preference shareholders, and 240,000 to the ordinary shareholder.

The Central Tcheleken Petroleum Co. has published a balance sheet made up to the end of 1906. The nominal capital is 1,000,000 roubles. Against this the company's concession stands at 940,000 roubles, and 60,000 roubles represents the initial expenditure before the formation of the company.

The Water Shut-off Difficulty.—A correspondent in the *Trade and Industry Gazette* urges the necessity for legislation to make the shutting off of water in oil drilling obligatory throughout Russia. He points out that only the Grosny oil field is now absolutely safe from the water danger, thanks to the measures adopted by the producers themselves and the local authorities. At Baku, where the water shut-off regulations are not so strictly observed, the oil field suffer to some extent from the water trouble, but the abundance of gases and oil prevents serious damage. At Berekei this question was neglected, and now this promising field has been almost hopelessly ruined, and many firms are abandoning it altogether.

AMERICA.

Activity in West Virginia.—The South Penn Oil Co. is now taking up large tracts of land in Preston county, W. Virginia, upon which development is shortly to be commenced. Other parties are in the field, and keen rivalry exists in the acquiring of leases.

Another Pipe Line Probable.—It is stated upon good authority that the Standard Oil Co. will soon be obliged to lay another pipe line to the Pacific coast on account of its increasing business.

Concerning New York's Exports.—During the seven months of this year the largest shipments of kerosene from New York have gone to Flushing, the total quantity being 60,000,000 gallons. Rotterdam has also taken 23,000,000 gallons, and Shanghai 20,000,000 gallons, London and Antwerp both having taken 16,000,000 gallons from that port.

New Companies.—Among the new companies recently registered in Ontario, Canada, are the following:—The Cooper-Tilbury Oil and Gas Co., with a capital stock of \$100,000; the Tecumseh and Walkerville Oil and Gas Co., the Crown Oil and Gas Co., with a capital of \$250,000; and the Toronto Tilbury Oil and Gas Co., with a capital stock of \$750,000.

Tulsa, the Centre of the Mid-Continent Region.—Our enterprising contemporary, the *Oil Investors' Journal* has recently opened an office at Tulsa, which, we are pleased to note, has already become very popular with the oil people. Visitors to this new rendezvous will be able to peruse the PETROLEUM REVIEW, as copies are now regularly dispatched from our publishing offices to Tulsa.

The Union Oil Company Increases Its Holdings.—Another large addition of territory has been made to the holdings of the Union Oil Co. between Whittier and Fullerton. This acquisition consists of 700 acres of the Meyer's ranch, west of the Murphy gusher territory. The land has, so far, not been tested for oil, but its location leads to the belief that the territory is in the producing belt.

Adopting Liquid Fuel.—Consul-General Hanna states that liquid fuel is now becoming generally used on the railways in Mexico.

Canada.—Some very optimistic gentlemen interested in the Canadian oil fields have prophesied that in time to come Canada may rival the United States in the matter of oil production. Of course, one never knows, but the *Oil City Derrick* aptly points out that if the Canadian territories ever yield half the production of the United States, the Government bounty of 52½ cents per barrel will quickly bankrupt the Dominion treasury.

A Gulf Pipe Line Contract.—The Security Oil Co. has placed the contract for 500 miles of eight-inch pipe for the building of its pipe line from Tulsa to Port Arthur, Texas. The Security Co., it will be remembered, operates a large refinery near Beaumont. The other lines which are to be laid to the Gulf from the Mid-Continent fields, are that belonging to the Texas Co., one to be laid by the Standard Oil Co., as recently announced in the REVIEW, and the J. M. Guffey Pipe Line.

ROUMANIA.

Who Said Alcohol for Motors?—The Colombia Co. has struck oil in two new wells at Bustenari. One of these wells yields an oil containing 31 per cent. of light benzine.

A Good Strike.—On the property of C. M. Pleyte, at Moreni, oil has been struck in two new boreholes, Nos. 5 and 6, at a depth of 251 metres, with a yield of from 40 to 50 tons per day.

Transfer.—The Bustenari-Gageni pipe line, together with the pumping and storage installations belonging to the European Petroleum Co., Ltd., has now been sold to the Credit Petrolifer. Until lately this pipe line was held on lease by the Romano-American Co.

September—A Busy Month.—The general meetings of the companies controlled by the Disconto-Bleichroeder will take place in September at the time of the Petroleum Congress. About the same time will also take place the formation of the Concordia Co., which is to absorb the Bustenari and Telega companies.

The Aquila Company.—The work of constructing the refinery of the Aquila Franco-Romana Co. at Ploesti is proceeding very rapidly, and it is expected that this will be ready to commence working about the middle of September. The production of crude oil by the Aquila Co. has substantially increased by the striking of oil in two of their new boreholes at Bustenari.

Concerning Production.—The production in July will probably shew a decline owing to the reduced output of the Regatul Roman Co. at Moreni. The production of this company began to decline in June, and this decline has continued in July. The production of all other fields is proceeding in a normal manner. A series of new boreholes are expected to be completed shortly, and this will again send up the production.

Disagreement Over an Agreement.—In view of the statements made to the effect that the agreement which has been arrived at between the European Petroleum Union and the Standard Oil Co., provides that Roumanian oil shall not be sold on the German market, except under another trade mark, the Roumanian Government, according to the *Moniteur du Petrole Roumain*, are about to take steps against the German firms operating in the Roumanian oil fields who have made themselves parties to this agreement.

Facilitating Oil Transport During the Army Manœuvres.—The question of transport of oil by rail during a certain period of this year is now causing great anxiety to the petroleum refiners and exporters. The grand manœuvres of the Roumanian Army will this year take place in the Dobrogea district. This will necessitate the taking up of the Constantza railway by military traffic for a considerable period, during which the transport of oil will be, if not stopped altogether, at least carried on with great difficulty and irregularity. The Prime Minister has been asked to take steps to increase the transport facilities of the railway so as prevent any serious inconvenience to the petroleum trade, and it is expected that he will use his efforts in this direction.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	5-3/4
Baku Russian Petroleum ..	£750,000 Ord.	£1	3/3-3/9
.. .. .	£650,000 5 1/2% Pref.	£1	5/6-6/0
Bibi-Eybat Petroleum Co. ..	£250,000 Ord.	£1	7/0-8/0
Californian Oilfields ..	£250,000 Ord.	£1	5 1/8-5 1/2
Commonwealth Oil Co. Pref	16/- paid up (Prem.)	£1	5 1/8-5 1/2 pm.
.. .. .	Def. £1 fully paid	£1	2 1/8-2 3/4
European Petroleum ..	£550,000 Pref.	£1	1/0-2/0
"	£550,000 Ord.	£1	0/6-1/6
"	£376,000 Deb.	£100	75-79
Russian Pet. & Liquid Fuel ..	£500,000 6 1/2% Pref.	£1	5/6-6/6
.. .. .	£600,000 Ord.	£1	5/0-6/0
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	1 1/2-1 3/4
.. .. .	£575,000 Ord.	£1	4/0-5/0
Shell Transport & Trading ..	£2,000,000	£1	44/6-45/6
"	£1,000,000 Pref.	£10	10-10 1/2
Spies Petroleum Company ..	£312,500	10s.	6/6-7/6

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Aug. 12th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	518	520
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,400	4,450
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-	250	152	154
cheff & Co.	250	—	—
Neft Co.	250	—	—
Nobel Bros.	5,000	9,600	9,700
"	250	482 1/2	—
Rops and Co. V... .. .	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading	250	—	—
Co.	250	—	—
" (Second Issue)	250	—	—

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 4s. od.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 3s. 9d.
Burmah Oil, Ord.	£1,100,000	£1	£3 3s. 9d.
Do. Pref.	£250,000	£1	£1 4s. 6d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	£6 16s. 6d.
Do. 5% Pref.	£18,900	£7	£4 13s.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 18s. 6d.
(17s. paid)			
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	£12 os. od.
(17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	£13 5s. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 8s. 6d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 14s. od.
Do. "B" Deb...	£150,000	£100	£172 xd.

DUTCH COMPANIES.

Company	Latest Quotations (per cent.)	Florins.
Arnhemsche Petroleum Mij.	—	1,000
Aurora (Deb. 5%)	—	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	122 1/2	50
" (Deb. 4 1/2%)	101	1,000
Gaboes	—	—
Holl. Rumeensche Petroleum Mij. ..	29	1,000
Int. Rum. Pet. Mij.	96	500
Java Petroleum Mij. (Ord.)	—	1,000
" (Pref.)	8 1/2	—
Koninklyke Nederl. Pet. Mij. Shares ..	276 1/2	250-1,000
" Share certificates ..	275	1,000
Mœara Enim Petroleum Mij.	133 3/8	100
" 1-1,000 Oblig. 5 ..	100	250-1,000
" Moesi Ilir " Petroleum Mij. ..	—	—
Nederl.-Rumeensche Petroleum Mij. ..	12	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij. ..	—	—
" (Deb. 5%)	—	—
Panolan Maatschappij Cert.	290	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	128 1/2	1,000
" (Common)	—	—
Sumatra-Palembang Petroleum Mij ..	93 1/2	500
Tarakan Petrol Mij.	40	—
Zuid Perlak Petrol. Mij. (Pref.) ..	107	—

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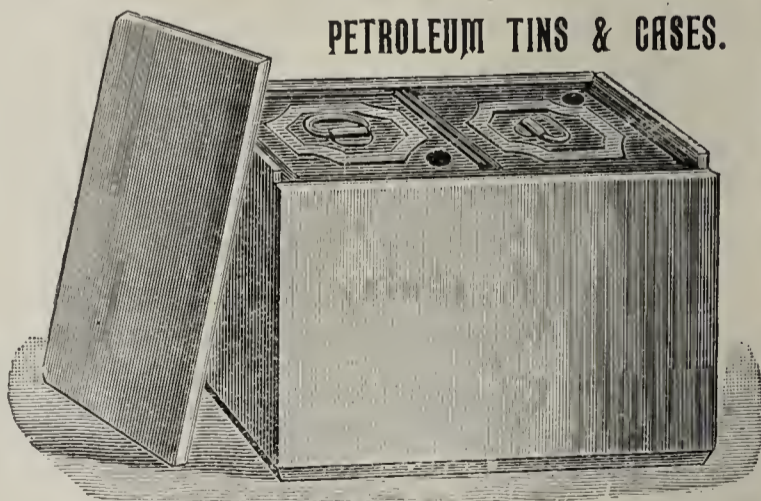
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*H.M. Chief Inspector of Explosives.*AND **SIR BOVERTON REDWOOD,**
Author of "A Treatise on Petroleum."

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SATURDAY, AUGUST 17TH, 1907.

A WORD ABOUT "TRUSTS."

THE determined fight which is being made against the very existence of the Standard Oil Co. in America must, to the thinking mind, open up a question of far wider and greater importance than that suggested by the imposition of a fine in a court of law, however gigantic that may be.

Of all the great corporations in America, it is the Standard that has been singled out for the persecution of the Government, and those who have followed recent events know full well that behind the charges of the alleged violation of the American laws, there is that veiled intention—that intention to overthrow the "Trusts"—which has for a long time been the fixed purpose of the American Government and its officials. It is scarcely correct to say that this intention of the American Government has been veiled, for throughout the whole course of the agitation and persecution—for we cannot call it prosecution—it has been evident that this was a method adopted simply as a means to bring about what may be called the "downfall of the Trusts."

Thus then the present situation which exists between

the United States Government and the Standard Oil Co. is seen in its most serious aspect when viewed in its real light; it shews that the Government has arrayed its forces not really to bring those who violate the law to justice (though we do not suggest that there has been any law violation on the part of the Standard Oil Co.), but to do something, no matter what, to secure a conviction against an amalgamation of interests, which they hope may do something to drive home the nails in the coffin of amalgamations of capital and labour.

When, therefore, speaking of the attitude of the American Government to the Standard Oil Co., we must remember that, rightly or wrongly, it cherishes the impression that such an amalgamation of interests (and these are not by any means confined to the trade in petroleum) is not for the well-being of trade, and thus should be put down by all possible means. America, we know, owes much to those men of commerce who, by bringing about a concentration of brains and capital, have made the trade of the New Continent what it is to-day; but, judging by its actions, the American Government holds very different views, looking upon the large trading corporations as evils which must at all costs be put down.

This view is underlying the action which has recently gone through the American courts, and brought to ridicule those who are charged with the administration of justice, and the only consolation is that however impressive the action may be upon certain sections of the community across the Atlantic, there is no reason to hope that in any other commercial country under the sun, such a strange mode of procedure will be copied.

In fact, everything points to other countries recognising the desirability of these powerful amalgamations of capital and labour, and giving them that treatment—that fair treatment—to which they are entitled. It is correct to say that in no other branch of commerce has such solid progress been achieved during the past decade as in the case of the petroleum industry, and it is also undeniable that no other industry owes so much of its progress and expansion to the efforts of amalgamations of interests.

For examples in this respect, we will look quite outside America. Take the case of the development and expansion of the petroleum industry in Dutch India. Here we see how quite recently a most powerful amalgamation of interests between the Royal Dutch Co. and the Shell Transport and Trading Co. has been brought about in order that the extensive producing and refining industry of the Dutch Indies may be more effectively controlled and developed to the advantage of all concerned. An amalgamation of interests will, therefore, henceforth do its best to develop the resources of the Dutch Indies; it will refine the crude oil and export it, while in England that same amalgamation will distribute the refined products north, south, east and west. And who will dare to say that this amalgamation is contrary to the spirit of our times, and should be opposed by Governments?

Whatever wisdom there is embodied in the policy of Great Britain, it must be admitted that there has always

been recognised that unwritten law that every person has a perfect right to form a combination of brains, capital, or labour, and that combination is given the utmost freedom. It is mainly owing to this, we believe, that England has made such rapid strides commercially that it to-day can be classed as one of the most successful and experienced commercial nations on the face of the earth.

But, speaking of these so-called Trusts, which are nothing more than amalgamations—for they are never seriously called monopolies—the important work of Mr. Henry W. Macrosty B.A., entitled “The Trust Movement in British Industry,” may be perused with advantage by those who contend that commerce suffers at the hands of amalgamations. Mr. Macrosty traces the Trust movement in this country to its fountain head, and after carrying the reader through its various stages of development and expansion draws certain conclusions.

His words are straight, yet full of warning. “Nothing,” he says, “could be more fatal than a panic to try and turn back a great industrial movement. So far as can be seen, the great amalgamations are the best instruments of production yet devised, and to break them up into their original components would be foolish if it were not in most cases impossible. Crude methods of suppression are always wrong, nor does it seem sensible to search among legal principles revelant to a different stage of industry for weapons to hamper and obstruct.”

Herein lies the crux of the whole question. Every commercial country in the world is bent upon progressing, and that as fast as the hands of progress will allow; and to raise a cry against powerful and studiously law-abiding corporations, simply because they are powerful, and have become successful on account of the collective brain power and capital underlying their constitution and directing their operations, is to strike a serious blow which may jeopardise, if not kill, a nation's future welfare.

In this respect, America has recently lost all sense of discretion. Unmindful of the power of amalgamation that has with sheer force brought her to be one of the foremost countries in the commercial world, she would, with one move of her machinery, completely cut off all future success and progress in her great branches of commerce.

We sincere'y trust that while there is time, she may seriously “count the cost,” and by upholding those organisations which have done so much for the expansion of her over-seas commerce, seek rather to strengthen than weaken the position which her great Corporations have gained in the markets of the world to the credit of America and her international trade.

Activity at Moreni.—Great activity prevails at Moreni, more especially on Tsuicani hill, where many new boreholes are being laid down. Wells Nos. 6 and 14 of the Romano-American Co. continue to spout intermittently at intervals of 10 to 15 minutes and yield large quantities of oil. The baling of the other boreholes of this company had to be suspended for want of storage and pumping facilities, which are all taken up by the output of the two spouting wells.

AN INVESTIGATION OF ANAPA PETROLEUM.

Mr. K. Kharitchkoff, who has since March been carrying on an exhaustive examination of the crude oil found in the neighbourhood of Anapa, has published in the *Neftiannoie Dielo* the results of his investigations. The oil was found on the property of Count Kankrin near the village of Suvorovsko-Tcherkesski on the Taman Peninsula. This locality has long been known as petroliferous and trial drilling is now carried on there. Regular exploitation of this oil field will commence shortly, and the equipment of the property for the purpose by the construction of storage facilities and pipe line to the sea is nearing completion. Apart from Suvorovsko-Tcherkesski, petroleum has also been found in other localities on the Taman Peninsula.

The investigations of the oil were carried out in the laboratory of the Vladicaucasian railway at Grosny.

The crude oil had a specific gravity of 0.9124 at 15° C. and a flash point of 24° C. It began to boil at 60° C. By distillation in a large copper vessel the following fractions were obtained:—

	Per Cent.	Specific Gravity.
Up to 110° C.	2.9 ..	0.7213
110 „ 120° C.	1.7 ..	0.7406
120 „ 130° C.	2.2 ..	0.7562
130 „ 140° C.	2.0 ..	0.7663
140 „ 150° C.	2.1 ..	0.7788
150 „ 160° C.	1.7 ..	0.7847
160 „ 170° C.	1.4 ..	0.8018
170 „ 180° C.	1.6 ..	0.8096
180 „ 190° C.	2.0 ..	0.8201
190 „ 200° C.	1.7 ..	0.8261
200 „ 210° C.	1.5 ..	0.8387
210 „ 220° C.	0.4 ..	—
220 „ 230° C.	0.9 ..	0.8514
230 „ 240° C.	0.9 ..	0.8574
240 „ 250° C.	3.0 ..	0.8691
250 „ 260° C.	3.5 ..	0.8809
260 „ 270° C.	2.6 ..	0.8901
Residue	66.9 ..	0.970
Loss.. ..	1.0 ..	—

The residue had a flash point of 140° C., tested by the Martins-Pensky apparatus.

The high specific gravity of the distillates and residue is very characteristic. The residuals are very viscous, and when treated with sulphuric acid yield 60 per cent. of the residue, or 40 per cent. of the crude in the form of oils soluble in sulphuric acid. By dissolving the refined residuals in amyl alcohol and fractional settling out with ethyl alcohol a series of fractions are obtained, resembling cylinder oils.

The above analyses shews that Anapa petroleum is very poor in low boiling fractions—benzine. The commercial products obtainable from Anapa crude oil are:—

1. Up to 100° C., benzine 1.6% of a sp. gr. 0.727
2. 100 to 150° C., ligroin (heavy benzine) 8.5% „ 0.763
3. 150 to 270° C., kerosene and astraline 20.8% „ 0.850

The specific gravity of the illuminating oil fractions is very high. They consist chiefly of astraline or heavy illuminating oil. Out of the ligroin fraction part can be utilised as a special light illuminating oil. Anapa petroleum does not contain any paraffin, and the high specific gravity speaks for the presence of a large proportion of naphthenes.

THE OIL TRADE IN BRITISH INDIA AND NATIVE STATES DURING 1906.

Special to the "Petroleum Review."

Through the courtesy of the officials at the India Office, Whitehall, S.W., some interesting details were given our representative this week concerning the oil trade of British India and native States during 1906. Contrary to the general impression, the Burma fields during the year did not yield so great a production as they did in 1905, the decrease being about 5,000,000 gallons. On the other hand, the Assam territories rather increased their production, but to a very slight extent only, its production being only one-sixtieth part of that obtained from Burma. The respective yields of the different fields for 1906, as compared with 1905, is as under, in gallons:—

	1906.	1905.
Burma	137,654,261	142,063,846
Assam	2,897,990	2,733,110
Punjab.. ..	871	1,488
Total	140,553,022	144,798,444

The value of the above production was:—

	1906.	1905.
	£	£
Burma	546,666	592,794
Assam	14,074	11,388
Punjab.. ..	13	22
	560,753	604,204

The home production all goes to satisfying the enormous demand which exists in India for petroleum, yet a very large import trade is yearly done in petroleum as the following figures shew, for last year the total imports reached 48,527,775 gallons as against 62,324,762 gallons for the year 1905.

These imports were obtained from the following countries (in gallons):—

	1906.	1905.
Russia	—	17,205,175
America	28,494,794	18,737,577
Borneo.. ..	1,795,715	7,039,812
Straits Settlements ..	8,499,198	12,508,844
Sumatra	9,731,405	6,816,991
Other Countries ..	6,663	16,363

In addition to the above, fuel and other oils were imported to the extent of 9,891,226 gallons during 1906 as compared with 9,466,492 gallons in 1905, while paraffin wax was received into British India to the extent of 1,665 cwts. during 1906 as compared with an import of 684 cwts. during 1905. In the above table it will be noticed that last year the Russian kerosene disappeared entirely from the markets in British India, the loss to Russia being a gain to the United States, whose imports increased by approximately 10,000,000 gallons.

The total value of the imports of kerosene for 1906 was £1,172,006 as against £1,498,238 for the preceding year. The amount was divided among the various countries as under:—

	1906.	1905.
	£	£
Russia	—	447,834
America	793,574	567,053
Borneo	33,553	135,337
Straits Settlement ..	145,781	216,415
Sumatra	198,721	130,806
Other Countries ..	377	793

THE BAKU PETROLEUM ASSOCIATION.

A special meeting of the Baku Petroleum Association was held at Baku on July 14th and 15th to deal with the question of the workmen's villages to be established at Bebe-Aibat and Zabrat.

It was resolved to accept the offer of the Kura Water Supply Co. to supply water to the Bebe-Aibat settlement on the condition that the water should, by filtration, be made suitable for drinking purposes, and that the question should be decided by the 1st of October (o.s.), otherwise a plant would be ordered at once for condensing sea water, capable of an output of about 80,000 gallons per day, and to cost up to 150,000 roubles. The meeting voted a sum of 76,000 roubles for building a road to the southern side of the village, and 160,000 for part of the streets in the village. The question of drainage was also considered, and the council was instructed to prepare a report and advise upon the best systems to be submitted to the next ordinary meeting of the association.

In regard to the Zabrat village, the committee empowered to negotiate with the peasants for the leasing of the land reported that the 70 dessatines allotted were insufficient, and recommended to petition the Government to grant a further 70 dessatines out of State lands, and additional 35 dessatines on the western side of Zabrat lakes, for transferring the mechanical workshops there.

The Shikhovo village will cost altogether about 500,000 roubles, and to raise this sum a charge of 3 roubles per square sagene will be made on those firms who will take plots. For the subsequent expenditure on transport facilities, an additional charge of 2 roubles will be made. To pay the rent and upkeep an annual charge per square sagene, the amount of which will be determined later, will be made. At the Zabrat village a first charge only of 1.50 roubles per square sagene will be made.

The council submitted their financial report, which shewed a considerable deficit, owing to a reduced production of crude oil and the accumulation of arrears. The council requested to be authorised to borrow money up to 400,000 roubles for working capital. The meeting by a majority of 101 to 7 decided to authorise the council to do this. Mr. Ogulevitch entered his protest against this decision, contending the association, not possessing such authority themselves, they could not delegate it to the council.

The meeting was then adjourned.

A NEW ENGLISH COMPANY.

NEW OIL REFINING PROCESS.

July 30th. £50,000 (£1). To adopt an agreement with J. Noad, E. J. Townsend, and W. McMullen, to which the Burmah Oil Co., Ltd., is to be a party, for the purchase of certain patents and patent rights, and to carry on the business of producers, refiners, storers, and distributors of and dealers in petroleum and its products, etc. The signatories are:—For the Burmah Oil Co., Ltd., 175, West George Street, Glasgow, R. King, R. W. Adamson, and F. G. Holdsworth (directors); J. T. Cargill, 175, West George Street, Glasgow; J. Hamilton, 175, West George Street, Glasgow; W. McMullen, 3c, Florence Road, Upton Road, London; W. Eacott, 29, Powell, Road, Clapton, N.E.; E. J. Townsend, 52, Queen Victoria Street, E.C.; J. Taggart, 52, Queen Victoria Street, E.C.; T. J. Bowles, 118, South Esk Road, Forest Gate, Essex (one share each). No initial public issue. First directors (not less than three nor more than four); J. T. Cargill, J. Hamilton, E. J. Townsend, and W. A. McMullen. Remuneration (except managing director), £150 each per annum. Dixon House, Lloyd's Avenue, Fenchurch Street, E.C.

THE PETROLEUM MAATSCHAPPIJ MOESI ILIR.

The above company, owning petroleum fields and a refinery in Sumatra, have published the report of their operations in 1906.

The production of crude oil, after deducting the oil used as fuel was:—January, 1,068 tons; February, 1,130 tons; March, 1,069 tons; April, 1,002 tons; May, 948 tons; June, 924 tons; July, 942 tons; August, 891 tons; September, 1,808 tons; October, 2,787 tons; November, 2,422 tons; December, 2,383 tons. Total for the year, 17,374 tons.

In September the oil property and refinery were transferred to the Royal Dutch Co. During the part of the year when the company still had possession of the refinery there were treated there:—5,967 tons of own crude oil, 8,357 tons of crude oil of the Royal Dutch Co., and 22,848 tons of Borneo crude oil.

According to a statement from the Asiatic Petroleum Co., Ltd., the sale of the company's products in 1906 has realised 287,548 florins. The company's expenditure in 1905 amounted to 364,920 florins.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO AUGUST 12th, 1907.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since July 29.	From Jan. 1.	Since July 29.	From Jan. 1.	Since July 29.	From Jan. 1.	Since July 29.	From Jan. 1.	Since July 29.	From Jan. 1.	Since July 29.	From Jan. 1.	Since July 29.	From Jan. 1.	Since July 29.	From Jan. 1.
Austria ...	—	—	—	67,440	—	67,770	—	—	—	—	—	—	—	—	—	135,210
Belgium ...	—	153,410	40,470	414,015	—	—	—	310	—	4,000	—	—	—	590	40,470	572,325
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	—	—	—	—	—	—	—	1,209,160	14,334,920	—	—	—	—	1,209,160	14,334,920
Germany ...	10,890	1,181,475	38,290	937,130	—	2,000	—	—	—	80	—	—	—	3,500	49,180	2,124,185
Holland ...	—	1,070	—	10,470	—	—	—	—	39,970	417,730	—	—	—	2,400	42,370	519,600
Roumania ...	—	5,744,090	—	—	—	—	1,429,200	5,159,590	—	1,459,000	—	238,700	—	—	1,429,200	12,601,380
Russia ...	408,000	22,948,970	1,250	2,913,620	—	—	887,040	837,040	—	9,990	—	—	2,000	1,417,110	1,298,530	28,176,730
U.S.A. ...	6,401,380	63,771,430	1,459,860	24,106,335	—	579,710	4,155,810	31,799,140	—	3,456,100	—	4,112,470	35,920	947,330	12,052,970	128,772,515
Other Countries	—	950	7,040	56,195	—	—	—	—	—	2,500	—	40	—	29,590	7,040	89,275
	6,820,270	93,801,395	1,546,910	28,505,205	—	649,480	6,472,050	37,846,080	1,249,370	19,684,320	—	4,351,210	40,320	2,488,450	16,128,920	187,326,140

The Third International Petroleum Congress.

THE COMPLETE PROGRAMME.

Reports from Roumania and also from other countries, where Congress Committees have been formed, shew that the work of preparing and organising for the third International Petroleum Congress is proceeding with great energy. Applications continue to pour in to the Roumanian Organisation Committee for participation in the Congress and the Exhibition to be attached to it of apparatus connected with the petroleum industry. The Roumanian Government have placed at the disposal of exhibitors, free of charge, the Royal Pavillion at the Roumanian Jubilee Exhibition of last year, so that there will be ample space which will be free for all exhibitors.

The following is the text of a circular sent out by the Roumanian Commission of the Congress containing the final detailed programme:—

We have the honour to hand you herewith the membership card for the third International Petroleum Congress, the opening of which is fixed for the 8th of September, 1907, at Bucarest, and we request you to kindly let us know by return of post, or at the latest by the 15th of August, 1907, if you wish to take part in the same, so that we may be able to send you in time the pass for free travelling on the Roumanian railways, which will entitle you to travel from the Roumanian frontier to Bucarest. We shall be glad if you will state in your reply the point on the frontier at which you will enter Roumania.

Further, we beg to inform you that the free passes are available by all trains except the Orient express.

We beg to give you the programme of meetings and excursions, as it has been worked out by the Organisation Committee of the Congress.

Before the formal opening of the Congress, an excursion will take place on 5th, 6th and 7th September to all the principal petroliferous centres in Roumania.

This excursion will be preceded by a lecture on the localities to be visited, which will be delivered at 3 p.m. on September 4th, in one of the halls of the University, destined for the meetings of the Congress.

The programme of this excursion will be as follows:—

September 5th.—Departure from Bucarest and visit the localities of Baicoi, Tzintea and Bustenari.

September 6th.—Visit to the localities of Campina and Poiana Vrajitorea.

September 7th.—Departure from Campina and visit to Gura Dragonesti and Moreni. Return in the afternoon to Bucarest. At 9 p.m., reception of members of the Congress in the Salons of the Ministry of Foreign Affairs.

Owing to local difficulties, this excursion cannot be usefully made except with a maximum of 60 persons, as was already mentioned in the first circular, and this number has already been completed by members who were the first to apply for participation in this excursion.

These latter members will receive special advice, and are requested to present themselves at the Bureau of the Congress to obtain their card entitling them to take part in the excursion; they will at the same time have to pay the subscription fixed for the excursion.

PROGRAMME OF THE MEETINGS OF THE CONGRESS AND OF THE EXCURSIONS.

Saturday, 7th September (n.s.), at 9 p.m.—Reception of members of Congress in the Salons of the Ministry of Foreign Affairs.

Sunday, 8th September.—Formal opening of the Congress at 10.30 a.m. in the Athenée Palace. In the afternoon, visit to the Exhibition. In the evening, gathering in the Oteteleschano Park.

Monday, 9th September.—From 9 a.m. to noon, meetings. From 3 to 6 p.m., meetings. In the evening, banquet to be given by the Mayor of the Capital.

Tuesday, 10th September.—Excursion to the Prahova Valley. Departure at 6 o'clock in the morning from the Northern station. Visit to Campina, Bustenari, Sinaia, and the Royal Castle at Pelesh. Return to Bucarest in the evening.

Wednesday, 11th September.—From 9 a.m. to noon, meetings. From 3 to 6 p.m., meetings. Simultaneously an excursion will be organised to the salt mines at Slania for members who may desire to see them. Return to Bucarest in the evening.

Thursday, 12th September.—From 9 a.m. to noon, meetings. In the evening, banquet to be given by the Roumanian Petroleum Association.

Friday 13th September.—From 9 a.m. to noon, meetings. In the afternoon, plenary meeting and closing of the Congress. In the evening, banquet to be given by the Minister of Industry, Commerce and Agriculture.

Saturday, 14th September.—Excursion to Constantza. At 6 a.m., departure from Bucarest for Guirgevo. At 7.30 a.m., boarding of a steamer at Guirgevo for a trip on the Danube to Cernavoda. Arrival at Constantza in the afternoon. In the evening, banquet to be given by the Prefect of the District and the Mayor of the town of Constantza.

Sunday, 15th September.—In the morning, visit to the port of Constantza and the petroleum harbour. In the afternoon, visit to the Mamaia beach. In the evening, banquet to be given by the Commissioners of the port of Constantza. At 10 p.m., optional departure for Constantinople.

During the 14th and 15th of September, and simultaneously with the excursion to Constantza, there will be another excursion to the oil fields in the Bacau district, in which only 30 members can take part. Therefore, members desirous of going there are requested to inform the bureau about it not later than the 15th August (n.s.).

GENERAL ARRANGEMENTS.—Each member will find ready for him at the bureau of the Congress special invitation cards for all the fêtes and banquets. For the excursions he will find a special note which he will have to produce at the bureau in order to obtain, upon payment of the fixed charge, a ticket entitling him to take part in the excursion. The excursion cards, as well as the membership card, may be asked for and should therefore be produced when requested.

THE COMING PETROLEUM CONGRESS.

MEETINGS OF THE VARIOUS COMMITTEES.

ENGLAND.

A meeting of the English Committee took place last Monday at the offices of Messrs. Thompson and Hunter, Leadenhall Buildings, Leadenhall Street, E.C. There were present:—Sir Fortescue Flannery, Bart., in the chair, Hon. A. Ponsonby, Professor Louis, Dr. P. Dvorkovitz, Mr. Leon Gaster, and the Hon. Secretary, Mr. A. Beeby Thompson.

The Hon. Secretary read regrets of inability to attend from Mr. Edward Agius, Mr. Alexander Duckham and Mr. D. A. Sutherland, General Manager of the Commonwealth Oil Corporation.

Letters were read from the Secretaries of the London Chamber of Commerce and Lloyds relating to the appointment of a delegate to the forthcoming Congress in Bucarest, and Sir Fortescue Flannery, Bart., who had been nominated by the London Chamber of Commerce, promised to attend personally to the matter.

A communication from the Secretary of the Congress at Bucarest was read requesting the early posting of papers so that they could be printed in time for the Congress.

Professor Louis, Dr. Dvorkovitz, Mr. Gaster and Mr. Thompson said their papers would be ready in a few days for transmission to the Central Committee.

GERMAN

The German Committee of the Petroleum Congress had a meeting recently at Berlin, Dr. Holde being in the chair. Dr. Holde in his speech explained the importance of the Congress and the great interest which it had aroused in German scientific as well as commercial and industrial circles. A large number of papers have already been announced for presentation to the Congress.

Dr. Schwarz, the secretary of the committee, made a statement of the progress already made with the work of preparing a proper representation of Germany at the Congress and the exhibition which will be attached to it, and stated that a large number of leading German firms had already promised to take part in it. The Permanent Commission for Exhibitions of German Industry had at the request of the German Committee, interested themselves in the Congress. Dr. Schwarz suggested that a special commemorative book of the Congress should be published, some firms having already promised to contribute towards the cost of such publication.

Dr. Weinstein, the treasurer of the Committee, spoke of the financial requirements of the Committee and the proposed steps to meet them. An exchange of views by various eminent men present took place and the meeting then adjourned.

GALICIA.

The Galician Congress Committee met recently at Boryslaw. It was resolved to recommend the exhibition of the following articles at the Exhibition to be attached to the Congress:—A model of the Wolski drilling apparatus, a complete Canadian boring rig with derrick

boiler and engine, model of a cable drilling rig, an apparatus for determining the weight of oil in a tank, a controlling apparatus for petroleum pipe lines, plans of an ordinary Canadian boring rig, plans of the improved Canadian rig (Wlodarczyk system), geological map of the Galician oil fields, by Mr. Gawronski, diagrams of the crude oil production, petroleum refining and exports during the last 25 years, samples of Galician crude oil and diagrams of their analyses, profiles of the deepest boreholes in Boryslaw and Tustanowice, samples of ozokerite, a complete set of samples of the products manufactured by certain refineries, and various tools and instruments.

The Committee have asked the Minister of Commerce to grant a subsidy for the purpose of Galician participation in the Congress.

The Galician Committee are now examining papers on the following subjects submitted for presentation to the Congress: (1) Cable drilling; (2) Progress achieved in recent years in the boring science in Galicia; (3) Installations for measuring crude oil in tanks; (4) Methods for establishing the place of origin of crude oils; (5) The petroleum and ozokerite fields of Galicia and latest discoveries there; (6) History of the development of the petroleum industry in Galicia.

ROUMANIA.

The Roumanian petroleum producers had a meeting on the 30th of July and discussed the question of their participation in the Petroleum Congress. Two committees were elected, one for Bucarest, consisting of Messrs. George Boamba, L. Elias, E. Saladin and C. Osiceanu, and another for the oil field districts, composed of Messrs. B. Lazarovici, R. Costinescu, L. Elias, G. Stefanescu and H. F. Braun. It was further resolved that the Petroleum Association shall give a banquet to the members of the Congress.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended August 3rd, was 247,000 poods, or 3,982 tons; and for the week ended August 10th was 149,000 poods, or 2,402 tons. (The Balakhany oil wells were stopped by a strike for six days last week.)

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended August 3rd was 201,000 poods, or 3,241 tons; and for the week ended August 11th was 181,000 poods, or 2,918 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 4th August was 151,160 poods, or 2,438 tons; and for the week ended 11th August, 142,750 poods, or 2,302 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 4th August was 129,936 poods, or 2,095 tons; and for the week ended 10th August was 125,088 poods, or 2,017 tons.

Lest we Forget.—No firm can become truly great without judicious advertising. Shall we send you the REVIEW's rates?

THE OIL FIELDS OF TRINIDAD.

Another Valuable Geological Report.

(Concluded from page 76.)

From the Oropuche lagoon the anticline runs through a number of sugar estates, the principal ones being Bien Venue, La Retraite, Hermitage, Dumfries, Picton, Wellington, Carron Park, Industry Bronté and Inverness.

In Picton and Wellington it is fairly clearly defined, but the crest cannot be located very accurately in most of the others. The horizon of the Rio Blanco oil sand is well below the surface over all this area, the surface being occupied by clays and marls.

Passing farther eastward the evidence is still scanty, but about two miles south of Princetown the anticline is again defined. The clays and marls of this district are flexured somewhat irregularly; minor undulations with steep dips, but of no great extent, have been detected, and the course of the main anticline is thrown into a sharp curve. Indications of estuarine conditions are not wanting, and lead north-eastward to the great mud-volcano known as the "Devil's Woodyard," beyond which the geological survey has not been carried out as yet. Small veins of manjak have been detected in the clays of this neighbourhood south of the anticline. Experimental drilling on the crest of the anticline south-westward of the mud-volcano might find a productive field, and though there is no certainty of obtaining oil in paying quantity, the geological conditions are sufficiently favourable to justify development work.

The drilling in all the area east of the lagoon may prove difficult on account of the soft nature of the clays to be drilled through, but no difficulty is likely to be experienced in the shutting off of water, as most of the rocks are very impervious.

To sum up, of the central anticline, 19 miles are shewn on the map. The western 14 miles present favourable propositions for drilling on both sides of the crest, while the lower bands of the Rio Blanco oil sand may be struck on the crest of the flexure in many places. Dips being low compared with those of the southern anticline, a considerable breadth of country on either side will be available for drilling without going to any great depth. The eastern five miles of the anticline present favourable propositions for drilling on the actual crest as well as on both sides of it, but the oil rocks being covered it is impossible to predict with certainty where oil will be struck. Of the northern anticline 26 miles are shewn on the map. The western six miles afford a field for drilling on both sides of the crest, where the striking of oil rocks at no great depth may be regarded as a certainty. Then follows 12 miles over which there is little or no evidence, but drilling on the anticline might give favourable results. The eastern eight miles, where the anticline is well defined, affords favourable propositions. In the event of drilling being successful on these main anticlines in the eastern part of the area, drilling

on some of the subsidiary anticlines might also be undertaken, and the productive area of the oil field greatly increased.

When evidence from a series of wells is available it will be possible to give a more complete account of the underground extension of the oil rocks and their variations in thickness, and to predict in what localities the best results will be obtained.

One other matter of economic interest may be referred to. The oil rocks at outcrop have been used in some instances for road making. The rock, when containing from 15 per cent. to 18 per cent. of bitumen, crushes readily under traffic, forming a surface which does not become too soft during the heat of the day, as asphalt does when spread thickly on the road surface. Nor would these oil rocks suffer to the same extent from the other chief defect of solid asphalt, *i.e.*, become too hard and slippery for horses' feet in cool or rainy weather.

Similar asphaltic sandstones have been used largely in America for paving purposes, after being fluxed with residual bitumen and mixed with the requisite quantity of crushed limestone or fine sand. It is found that the value of such rocks for paving material depends chiefly upon the presence of a sufficient quantity of very finely divided inorganic matter known as "filler," which cannot be introduced mechanically with any success.

A series of experiments should be undertaken to ascertain whether these oil rock outcrops in Trinidad could be used in a similar manner. The percentage of bitumen is as great or greater than in rocks used for this purpose in America. A quantity of the rock should be obtained, the bitumen extracted and the inorganic residue graded by passing through a series of sieves of graduated mesh. Mr. Clifford Richardson gives the following as "an ideal towards which to work" in making an asphalt pavement.

						Per cent.
Bitumen	..	..	..	..	..	10 or above
Inorganic matter passing 200 mesh	..	..	..	..	..	10
"	"	"	100	"	..	10
"	"	"	80	"	..	20
"	"	"	50	"	..	24
"	"	"	40	"	..	10
"	"	"	30	"	..	8
"	"	"	20	"	..	5
"	"	"	10	"	..	3

Coarser mixtures have frequently answered very well. The meshes are per square inch.

If results at all comparable could be obtained from asphaltic sands in Trinidad, another branch of the paving industry might be supplied with material from this colony as hundreds of thousands of tons of asphaltic sandstone is in sight in accessible places and could be quarried without much difficulty.

In any case the local roads, and perhaps the streets of Port-of-Spain, could probably be supplied as cheaply with the asphaltic sandstone as with lake-pitch, and a better surface would be maintained.

AMONG THE BRITISH CONSULS.

THE TRADE OF AMOY.

Writing with reference to the trade of Amoy (China) during 1906, the British Consul points out that the kerosene oil market during the year was free from sudden fluctuations in prices, and a steady business was maintained. Of the oil imported about 75 per cent. was from Sumatra or Borneo, and 25 per cent. was of American origin. This contrasts strangely with the figures of 1896, when American and Russian oil, in equal shares, provided over 95 per cent. of the trade, and Sumatra oil the small remainder. The Standard Oil Co., of New York, are proceeding actively with their tank installation on the mainland, and on its completion within a year a keen struggle for the trade may be anticipated. The new tank is to be capable of holding 750,000 gallons of oil. The next step in view is the erection of small storage tanks in the principal towns in the district to be supplied by regular "tank-junks" sailing from Amoy and fed by the bulk installation at this port.

AMERICAN OIL PREDOMINATES.

According to the British Consul of the district of Shimanoseki (Japan), the import of kerosene oil in 1906 amounted to 4,157,993 gallons in quantity and £77,630 in value as against 2,075,865 gallons, valued at £42,451, imported in 1905; shewing an increase of 2,082,128 gallons in quantity and £35,189 in value. The oil was American case oil, and was imported by the Standard Oil Co.

THE TRADE OF BASRA.

The Consular report upon the trade of Basra (Turkey) for the year 1906 shews that the imports of petroleum for the 12 months increased to the extent of 53,109 cases, which represented an increased value of £20,155. The total quantity of petroleum imported was 111,000 cases. Of this quantity, 59,000 were cases of American oil, and 52,000 were Russian oil. The Consul goes on to point out that petroleum, spirit, etc., for conveyance from a Turkish port inland or abroad are, when landed in

Turkey, placed in a dépôt specially appointed for the purpose, and are liable to storage dues. If petroleum is in transit, dues are not levied at the port of discharge. If, however, the petroleum is not forwarded, it is placed in the dépôt provisionally, and, if not despatched within one week, it is subject to the ordinary charges. These are as under:—1½ pias. per case per month for the first month, and 1 pias. per case for the succeeding months. Petroleum in transit, if discharged into lighters and not despatched within three days, pays 5 pias. per case for the days it is delayed.

RECENT PUBLICATIONS.

"PEAT: ITS USE AND MANUFACTURE," by Philip R. Bjorling and F. T. Gissing. Published by Charles Griffin and Co., Ltd., Exeter Street, Strand, W.C.

In this publication the authors are associated with a work which must rank as being one of the most important upon the utilisation of peat. The formation, growth and distribution of peat are phases of the question very carefully gone into, but what is perhaps of more interest to the average reader is the fact that it treats in a most comprehensive manner with the use of peat as fuel and the various methods adopted for its preparation in this direction. The principal classes of machinery adopted for squeezing and drying peat all come under the consideration of the authors, who not only refer to the systems which have proved the most satisfactory in this respect, but who touch upon those methods adopted long ago, but which the advance of science has rendered undesirable. Special attention is paid to the fact that the too frequent handling of peat considerably increases its cost of treatment, and so the authors come to the conclusion that the only satisfactory method for the economical conversion of peat into a fuel for domestic and manufacturing purposes is to take it direct from the bog, and on no account to handle it before it is ready for transport. A chapter is devoted to an explanation of the difficulty of drying, the conclusions arrived at being that in no case must artificial heat be employed.

Apart from the numerous diagrams of various peat machines, a number of tinted reproduced photographs are given of the various peat bogs in Sweden, and the apparatus there used for the conversion of the peat into briquettes. In fact, from start to finish, the authors deal with this interesting subject of peat in a manner which leaves no doubt as to their ability, and it is safe to say that the publication is one of the most welcome that has yet been issued in connection with Messrs. Griffin's scientific text-book series.

Oil in Utah.—A dispatch from Los Angeles, Cal., dated July 15th, states that news of a big strike of oil in Washington county, Utah, have been reported. The discovery is in the region known as the Virgin river valley, and the oil was struck in good quantity at a depth of a little over 300 feet. The well is now producing 75 barrels per day.

DETAILS OF BAKU PRODUCTION AND BORING DURING MAY, 1907.

The following are the details of the production of crude oil at the Baku oil fields during May as published in the latest issue of the *Neftiannoie Dielo*:—

						PRODUCTION (in poods).				Average per Well per Day.
						By Baling.	By Spouters.	Casual.	Total.	
Balakhany	..	..	..	..	682	6,481,336	—	23,417	6,504,753	270
Saboontchi	..	..	..	..	621	14,826,185	34,500	388,233	15,248,918	823
Ramany	..	..	..	..	198	7,605,874	—	13,046	7,618,920	1,336
Bebe-Aibat	..	..	..	..	198	9,972,229	56,406	56,965	10,085,600	1,897
Total in May, 1907	..	..	..	..	1,699	38,885,624	90,906	481,661	39,458,191	790
Total in April 1907	..	..	..	..	1,687	37,523,022	1,306,124	407,721	39,236,687	831
Total in May, 1906	..	..	..	..	1,475	41,336,058	352,640	387,816	42,076,514	965

The production by spouters in May was obtained from the following wells:—

Name of Firm.					No. of Plot.		No. of Well.		Production. Poods.	
At Saboontchi	..	..	..	Neft Co.	..	..	35/c	..	59	34,500
„ Bebe-Aibat	..	..	..	Nobel Bros.	..	..	27	..	27	43,600
„ „	..	..	..	Schibaieff Co.	..	..	29	..	7	5,800
„ „	..	..	..	„	..	..	29	..	4	7,000

THE STANDARD OIL COMPANY'S DEFENCE.

The following official statement has been sent out by the Standard Oil Co., which is self-explanatory:—

"Since the enactment of the Interstate Commerce Law, in 1887, the Standard Oil Co. has most carefully observed its provisions, and in no case has wilfully violated the law. It welcomed the passage of the law and the principle of equity which was embodied in it. The old system of special rates and rebates was obnoxious and was never a source of profit to the company. The net rate paid for freight was always used as a basis for the selling price in the markets, and the consumer uniformly had the benefit of it. Moreover, every shipper could secure such special rates, and it was no uncommon experience for the Standard Oil Co. to discover that its competitors had lower rates than it was shipping under. The assertion so often made by careless and sensational writers and critics that 'rebates' were the basis of Standard Oil prosperity is absolutely untrue. Its prosperity has come through its correct apprehension of the possible magnitude and importance of the petroleum business, through its having provided better and more economical methods for doing business than have its competitors, and through a better service to the public in price and quality than others have given. It has made the petroleum industry great, has held it for this country as against foreign competitors, and, we assert, has been a blessing and not a bane to the country. Its downfall through any cause would be a national disaster."

DR. C. T. DEANE AND THE CALIFORNIAN PETROLEUM INDUSTRY.

The Californian Petroleum Miners' Association has recently issued a bulletin which contains an interesting letter by Dr. C. T. Deane, its Secretary, upon the conditions of the Californian oil industry during 1907.

Mr. Deane points out that there are three oilfields in California which are all proved great producers—Kern River, Coalinga, and Santa Maria, but now Coalinga

surpasses Kern River in production, while it is also the largest in area.

The production of the Californian fields during 1906, the writer points out, was approximately 100,000 barrels daily or 36,500,000 barrels for the year, though probably the exact figures will be in excess of these here given. Now that better conditions prevail, the Californian fields are producing larger quantities of oil than ever before, and he expects that before the present year is out California will have reached a production for the twelve months of about 40,000,000 barrels.

For any future increase of demand, Dr. Deane says they must look to exportation, for the home demand is fairly well satisfied. The establishment of the pipe line across the Isthmus of Panama will do much in this respect, while large orders are bound to come for oil for the East, Japan having already contracted for 10,000,000 barrels.

DESTRUCTIVE FIRE AT THE DESMARAIS PETROLEUM REFINERY AT IVRY.

A destructive fire occurred at the petroleum refinery at Ivry, Paris, on Monday evening. The refinery, which is the property of Messrs. Desmarais Frère, was, as a result, considerably damaged, many of the buildings collapsing during the conflagration. The damage is put down at nearly £40,000. The cause of the outbreak is said to be due to some mischief-making boys placing some lighted straw in one of the pipes connecting with the petroleum storage tanks.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 15th August, 1907, as follows:—

Owing to the holidays very little business has been done during the past week. Prices remain unchanged as under:—

1c	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	15/4 $\frac{1}{2}$ per box.
1c	19 $\frac{1}{4}$ × 14	120 "	110 "	15/4 $\frac{1}{2}$ "
1c	20 × 10	225 "	156 "	21/6 "

Tin lining and iron hooping extra. F.o.b. Wales.

GULF REFINING CO.,

Refiners of Indian Territory and Texas Petroleum.

We make a Speciality of
SUPERIOR LUBRICATING OILS OF HIGH VISCOSITY AND LOW COLD TEST.

Prompt Shipments from New York, Philadelphia,
 Boston, New Orleans and Port Arthur, Texas.

Special Prices to Large Jobbers and Refiners
 CORRESPONDENCE SOLICITED.

General Sales Office—**FRICK BUILDING ANNEX, PITTSBURGH, PA., U.S.A.**

European Representative—**H. E. WATSON, 10, RUE THIMONNIER, PARIS, FRANCE.**

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR JUNE.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during June were as under:—

	1906. Quantities, Gallons.	1907. Quantities, Gallons.
CRUDE—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	977,239	—
New York	3,250	403,244
Philadelphia	6,238,371	7,924,156
Galveston and Sabine	1,756,758	5,290
Total	8,975,618	8,332,690
Total value for the month, 1906 .. ..	.. ..	\$523,485
" " " 1907 .. ..	.. ..	\$518,899
NAPHTHAS—		
Baltimore	—	210
Boston and Charlestown	—	370
Delaware	—	—
New York	676,020	2,482,582
Philadelphia	580,760	1,158,742
Galveston	—	—
Total	1,256,780	3,641,904
Total value for the month, 1906 .. ..	.. ..	\$154,365
" " " 1907 .. ..	.. ..	\$377,095
ILLUMINATING—		
Baltimore	—	75
Boston and Charlestown	52,130	2,590
Delaware	—	—
New York	37,924,965	50,629,016
Philadelphia	29,526,959	20,899,740
Galveston	1,634,889	—
Total	69,138,943	71,531,421
Total value for the month, 1906 .. ..	.. ..	\$4,671,512
" " " 1907 .. ..	.. ..	\$4,933,119
LUBRICATING—		
Baltimore	468,134	399,189
Boston and Charlestown	8,649	164,665
Delaware	—	—
New York	5,964,923	6,555,040
Philadelphia	2,770,355	2,803,808
Galveston	919,415	466,719
Total	10,131,476	10,389,421
Total value for the month, 1906 .. ..	.. ..	\$1,363,785
" " " 1907 .. ..	.. ..	\$1,352,398
RESIDUUM—		
Baltimore	—	—
Boston and Charlestown	17,500	—
Delaware	—	—
New York	1,376,013	65,644
Philadelphia	1,784,083	3,414,423
Galveston	1,287,608	1,002,609
Total	4,465,204	4,482,676
Total value for the month, 1906 .. ..	.. ..	\$140,645
" " " 1907 .. ..	.. ..	\$147,867
TOTAL MINERAL OILS—		
Baltimore	468,134	399,474
Boston and Charlestown	78,279	167,625
Delaware	977,239	—
New York	45,945,171	60,135,526
Philadelphia	40,900,528	36,200,869
Galveston	5,598,670	1,474,618
Total	93,968,021	98,378,112
Total value for the month, 1906 .. ..	.. ..	\$6,853,792
" " " 1907 .. ..	.. ..	\$7,329,378

ROUMANIAN PRODUCTION IN JUNE.

According to the provisional statistics to hand the total production of crude oil at the Roumanian oil fields in June amounted to 88,946 tons, against 97,993 tons, the exact figure for May. Probably, about 2,000 tons will be added to the June figure when completed, and this will bring it up to 91,000 tons, which is some 7,000 tons less than in May.

The production in June was distributed among the different fields as under:—

	June. Tons.	May. Tons.
Prahova District—		
Bustenari	35,496	37,899
Campina-Poiana	16,453	19,199
Moreni	26,384	29,780
Baicoi-Tinta	6,176	5,357
Other Fields in Prahova	1,268	1,584
Total for Prahova	85,777	93,819
Dambovitza District	1,840	2,824
Buzeu	755	775
Bacau	574	575
Total	88,946	97,993

The production of the leading firms in June, compared with the figures for May, was as under:—

	June. Tons.	May. Tons.
Steaua Romana	25,901	28,306
Regatul Roman Co.	17,723	21,287
Bustenari Co.	10,734	12,103
Romano-American Co.	8,669	10,204
Trajan Co.	5,060	4,315
Sylva Co.	4,402	4,537
International Co.	3,192	2,051
C. M. Pleyte and Co. (late Moreni Co.)	3,015	1,982
Colombia Co.	2,107	2,361
Aquila Franco-Romana	1,615	1,305
Arnheemsche Petroleum Co.	852	1,018
Naphta Co.	685	693
Gallo-Romana Co.	510	398
H. F. Drader	179	744

THE THIRD International Petroleum Congress

This Congress will take place at Bucarest during the first half of next month under the Patronage of His Royal Highness, Prince Ferdinand, Heir to the Throne of Roumania.

Upon the occasion there will be organised an Exhibition of Instruments, Apparatus, Reports and Statistical Data dealing with the Petroleum Industry.

The Congress and the Exhibition will comprise the following sections:—

SECTION I.

GEOLOGY, EXPLORATION, EXPLOITATION.

SECTION II.

CHEMISTRY and TECHNOLOGY of PETROLEUM.

SECTION III.

LEGISLATION, COMMERCE.

Persons desirous of joining the Congress are requested to communicate with the—

COMMISSION DU PETROLE

LABORATOIRE DE MINÉRALOGIE À L'UNIVERSITÉ,
BUCAREST, ROUMANIA.

The Jennings Field.—The Jennings territory is giving a few surprises, one of which is the Producers' Oil Company's No. 10 well, which, worked with an air compressor, is giving a production of 1,500 barrels daily. This well is 2,300 feet deep, and was started 12 months ago. It was an expensive well, costing nearly £4,000 to drill, but within the first month of producing this was returned to the owners. Other wells now drilling or nearing completion give every promise of being very good producers.

The American Oil Market.

New York, Week ended August 3rd.

The Congo pool in Hancock county, West Virginia, continues to attract considerable interest, and the shallow sand territory in this vicinity still leads in development work, while more activity is noted in experimental work in the deep sand districts. There are limited areas in this section that have not been tested, but any property that appears favourable is held at a premium that renders it practically prohibitive. Completions in Harrison county in the vicinity of Ten Mile district have continued of a disappointing character, light pumpers being experienced where gassers and dusters were not encountered. In south-eastern Ohio an occasional good producer is presented, although developments of importance have been confined to Monroe county. The Illinois fields, says the *Oil, Paint and Drug Reporter*, shew no signs of declining productivity, new wells within defined limits more than compensating for any falling off in the yield from old wells. Indiana and Ohio operators have shewn a disposition to rush work in several of the Ohio river counties of Kentucky, and in the western part of the State, West Virginia and Pennsylvania interests are represented in leases of territory that are regarded as partaking more or less of "wild catting." The price of crude at the wells in barrel lots as quoted by the Standard Oil Co. are as follows:—Pennsylvania, \$1.78; second sand, \$1.78; Tiona, \$1.78; Amber, \$1.78; Corning, \$1.14; New Castle, \$1.22; Cabell, \$1.32; Butler, \$1.78; North Lima, 94c.; South Lima, 89c.; Casey, 68c.; Indiana, 89c.; Princeton, 68c.; Kansas, 41c.; Somerset, \$1.20; Ragland, 75c.; Corsicana—light, \$1.02; heavy, 70c.; Henrietta, 60c.; Canada, \$1.34.

REFINED AND PRODUCTS.—The local situation has presented no important changes during the past week. The demand for home requirements has been chiefly of a routine character, although the aggregate volume of business for the week has reached very satisfactory proportions. The export demand, while not as large as that for domestic consumption, has been well up to seasonable expectations and general conditions appear healthy. Clearances aggregated 11,083,710 gallons from New York and 6,182,970 gallons from Philadelphia, against 9,818,880 gallons and 6,736,700 gallons respectively during the previous week. The tendency in the London and Liverpool markets has been a trifle easier. Late cable advices from foreign markets named the following quotations: Antwerp, 21¼ francs; London, 6½d.; and Bremen, 6.35 marks.

The continued fine weather has stimulated the demand for the products for gas engine consumption, and dealers have experienced some difficulty in satisfying this demand, owing to the light production of crude. Exports of naphtha from this port have been light, clearances for the week amounting to 43,500 gallons. Freight rates have continued steady, but remain unchanged as follows for cases by sailing vessel:—Amoy, 18½c.; Calcutta, 12c.; Java, 15@18c.; Hong Kong, 18½c.; Rangoon, 19c.; Saigon, 20½c.; Shanghai, 20½c.; Singapore, 16@17c.; Yokohama, 18½@19c. per case.

CLOSING QUOTATIONS

CRUDE.	Week ended	
	July 27. 1907.	Aug. 3. 1907.
Pennsylvania crude in bbls.	\$8.20	\$8.20
Pennsylvania crude in bulk	4.75	4.75
Residuum, bbls. for export	6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

	Week ended	
	Aug. 3. 1906.	Aug. 3. 1907.
Tiona	1.74	1.78
Pennsylvania	1.64	1.78
North Lima	0.98	0.94
South Lima	0.93	0.89
Indiana	0.93	0.89
CANADIAN OIL:		
Petrolia	1.37	1.34

REFINED—FOR EXPORT.

	Week ended	
	Aug. 3.	
Barrels, cargo per gal.	\$8.45	@ 10.45
Philadelphia	8.40	@ 10.40
Bulk, New York	5.00	@ 7.00
Bulk, Philadelphia	4.95	@ 6.95
Cases, New York	10.90	@ 13.90
Cases, Philadelphia	10.85	@ 13.85

REFINED IN CASES—IIO FIRE TEST.

	Week ended	
	July 27. 1907.	Aug. 3. 1907.
3,000 to 10,000	10.80	10.80
1,000 to 3,000	10.85	10.85

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

	Week ended	
	July 27.	Aug. 3.
120 fire test, S.W. .. in barrels	12	12
130 fire test, S.W.	12½	12½
150 fire test, W.W.	13½	13½
In bulk from tanks	10	10
300 fire test	13½@14	13½@14

NAPHTHA AND GASOLENE.

	Week ended	
	July 27.	Aug. 3.
Naphtha, crude, car. lots, 68 @ 72 deg.	17.00	17.00
Gasolene, 86 deg.	24.00	24.00

PENNSYLVANIAN OIL RUNS from July 23rd to July 29th were:—July 23rd, 295,997; July 24th, 107,801; July 25th, 325,237; July 26th and 27th, 150,806; July 28th, 205,912; and July 29th, 140,644. For the month of June, 2,756,086.

THE DELIVERIES OF PENNSYLVANIA OIL from July 24th to July 30th were:—July 24th, 178,863; July 25th, 188,258; July 26th, 148,544; July 27th and 28th, 284,069; July 29th, 161,595; and July 30th, 193,735. For the month of June, 5,071,735.

CLEARANCES FOR THE WEEK.

During the week ended Aug. 2nd, and since Jan. 1 the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1906.
Refined	11,083,710	270,475,780	267,782,080
Crude	1,000	1,380,925	232,900
Naphtha	43,500	5,872,450	12,637,569
Residuum	—	375,877	3,613,000

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Aug. 2nd ..	14,778,280
Total from New York, from Jan. 1st, 1907 ..	412,100,960
Same period last year	405,818,921
Increase	6,282,039
From United States, week ended Aug. 2nd ..	16,250,003
Total from United States, since Jan. 1st, 1907 ..	719,469,202
Same period last year	681,626,220
Increase	37,842,982

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The "Review" Shipping List.

AUGUST 16, 1907.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Lisbon	Selzaete	Arr. Aug. 12	EZIO	—	—	Coasting Peru
ALICE ISABELLE..	Philadelphia	Sables d'Olonne	Arr. July 27	FRANCE MARIE ..	Philadelphia	Marseilles ..	P. Del. Break, July 31
ALEMBIC	New York ..	Sydney(C.B.)	Arr. July 12	GEESTEMUNDE ..	New York ..	Oscarshamn	L. Aug. 6
AMERICAN	Antwerp	New York ..	Arr. Aug. 11	GENESSE	Manchester	New Orleans	P. Cape Henry, July 27
APPALACHEE	San Francisco	Hankow	L. July 6	GEORGIAN	Philadelphia	La Pallice & Rouen	P. Del. Break., July 30
APSCHERON.....	Ibrail	Antwerp	P. Constant'ple, Aug. 7	PRINCE GOLDMOUTH	Bremerhaven	—	At Port Said, July 20
ARAL.....	Tyne	Philadelphia	P. Butt of Lewis, Aug. 9	GUTHEIL	Philadelphia	Swinemuude	L. Aug. 6
ARAS.....	Newport	Philadelphia	P. Fastnet, Aug. 4	HAINAUT	Algiers	Antwerp	Arr. July 30
ARGYLL	—	—	Coasting U.S. (Pacific)	HARRY WADSWORTH	Kustendje ..	Rouen	At Vigo, Aug. 8
ASHTABULA	San Francisco	Hankow	L. July 22	HELOIS.....	Bremerhaven	Philadelphia	L. Tyne, Aug. 3
ASTRAKHAN.....	Hamburg & Tyne	Philadelphia	Arr. Aug. 4	HERMIONE	Philadelphia	Havre	L. Aug. 2
ATLAS	—	—	Coasting U.S. (Pacific)	HOTHAM	Antwerp	Swansea	Arr. Aug. 14
AUGUSTA	Barry	Havana	P. Lundy Island, July 11	NEWTON HOUSATONIC	Tyne	Philadelphia	Arr. Aug. 6
AUGUST KORFF..	Manchester	Philadelphia	Arr. Aug. 13	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
AUREOLE	New York ..	Lisbon & Oporto	L. July 25	JOANNIS COUTZIS	Rouen	Piræus.....	L. Aug. 2
AZOV.....	—	—	Trading on W.C. of South Amca.	J.B.AUG.KESSLER	Batoum	Bombay	Arr. Aug. 9
BAKU STANDARD	Rouen	Tyne	Arr. Aug. 5	JAMES BRAND	Kustendje ..	London	Arr. Aug. 10
BALAKANI.....	Kustendje ..	—	Off Cape Bon, Aug. 11, bd. N.	JULES HENRI	Tarragona ..	Barcelona ..	Arr. Aug. 9
BATOUM	Kobe	Palembang..	L. July 11	KURA	Port Talbot	Constant'ple	P. Mumbles, Aug. 13
BAYONNE	Venice.....	New York ..	L. Aug. 8	LA CAMPINE.....	Antwerp	Philadelphia	Arr. Aug. 10
BEACON LIGHT..	London	Philadelphia	P. Prawle, Aug. 3	LA FLANDRE	Ghent	New York ..	P. Scilly, Aug. 1
BEME	Rangoon....	Calcutta	L. July 30	LA HESBAYE.....	Antwerp	Kustendje ..	Off the Wight, Aug. 15
BLOOMFIELD	Rotterdam ..	Tyne	Arr. Aug. 9	LA MADELEINE ..	Algiers	Brest	Arr. June 15
BORJOM	Alexandria..	Constant'ple	L. July 29	LA VIGUESA	Vigo.....	Philadelphia	L. July 19
BRILLIANT	Copenhagen	Philadelphia	L. Tyne, Aug. 3	LACKAWANNA....	Sabang	Barrow	Arr. Aug. 11
BROADMAYNE	Cette	Philadelphia	P. Gibraltar, Aug. 10-11	LANSING.....	—	—	At San Francisco, July 2
BULLMOUTH	Hankow	Shanghai ..	Arr. May 25	LE COQ.....	Philadelphia	Bilbao.....	P. Del. Break., July 28
BULYSESSE.....	Batoum	Bombay	Arr. July 22	LOUTSCH	Messina	Batoum	L. Constant'ple, Aug. 4
BURGERMEISTER	Danzig	New York ..	P. Dunnet Head, Aug. 14	LUCERNA	Philadelphia	Bergen.....	Arr. Aug. 8
PETERSEN	San Francisco	Shanghai ..	Arr. Aug. 12	LUCILINE	Philadelphia	Blaye	L. Aug. 7
CALCUTTA.....	London	Sabine Pass	Arr. June 17	LUMEN.....	Tyne	Philadelphia	Arr. Aug. 4
CAPTAIN A. F. LUCAS	Singapore ..	Hamburg ..	Arr. Aug. 4	LUX	Cette	Kustendje ..	L. Aug. 10
CARDIUM	Honolulu ..	—	L. July 31	MANHATTAN	Alexandria..	Philadelphia	Arr. Aug. 6
CATANIA	Cardiff	Batoum	P. Barry Island, Aug. 10	MANNHEIM	New York ..	Swinemuude	L. Aug. 4
CAUCASIAN	—	—	—	MARGARETHA ..	Rio Janiero	Rio Grande	Off Rio Grande Bar, Aug. 6
CHARLOIS	Tyne	Philadelphia	Arr. Aug. 9	MAVERICK.....	Seattle.....	San Francisco	Arr. July 25
CHESAPEAKE	Tyne	Philadelphia	Arr. Aug. 8	METEOR	Singapore ..	Cape Good Hope	L. July 12
CHESTER	Antwerp	New York ..	P. Scilly, Aug. 8	MEXICAN PRINCE	Tyne	Constant'ple	Off the Wight, Aug. 11
CIRCASIAN	Buenos Ayres	Callao	L. Monte Video, May 5	MIRA	New York ..	London	L. Aug. 4
PRINCE CLAM	Freshwater..	—	At Suez, Aug. 5-6	MUREX.....	Shanghai ..	—	L. July 1
COL. E. L. DRAKE	Seattle.....	San Francisco	Arr. July 28	NARRAGANSETT..	London	Tyne	Arr. Aug. 4
COWRIE	Trieste.....	Kustendje ..	L. Aug. 9	NERITE	—	—	Tr. in China Seas
CUYAHOGA	Manchester	New York ..	P. Torr Head, Aug. 8	NEW YORK	New York ..	Southampton	L. Aug. 10
CYMBELINE	Manchester	Batoum	L. Aug. 13	OCEAN	Batoum	Rotterdam ..	L. Constant'ple, Aug. 8
CZAR NICOLAI II.	Hamburg ..	Batoum	Arr. Aug. 3	OILFIELD	Penarth	Philadelphia	Arr. Aug. 14
DAGHESTAN.....	Rouen	Swansea	Arr. Aug. 14	ORANJE PRINCE..	Tyne	Cuba	P. Beachy Head, July 20
DAKOTAH	San Francisco	Hong Kong	Arr. July 31	ORIFLAMME	Cardiff	Novorossisk	P. Sagres, Aug. 7
DELAWARE	Palembang..	New York ..	Arr. Aug. 2	OSCEOLA	Norfolk (Va.)	Bluefields ..	L. July 30
DEUTSCHLAND ..	Hamburg ..	New York ..	L. Aug. 13	OTTAWA	London	Tyne	Arr. Aug. 4
DIAMANT	Philadelphia	Gothenburg	P. Dunnet Head, Aug. 15	OURAL	Batoum	Hamburg ..	P. Constant'ple, Aug. 13
EDWARD	Swansea	Batoum	P. Sagres, Aug. 5	PALEMBANG	Balekappan	Colombo....	Arr. July 23
DAWSON	Calcutta	Aroe Bay ..	L. July 20	PAULA	Tyne	Philadelphia	P. Dunnet Head, Aug. 1
ELAX.....	Amsterdam..	Philadelphia	P. Dover, Aug. 3	PECTAN	London	Galveston ..	P. Lizard, July 21
ENERGIE	Philadelphia	Oxelosund ..	P. Elsinore, Aug. 7	PENNOIL.....	Tyne	Philadelphia	Arr. Aug. 5
ERIVAN	Tyne	Batoum	Off Pantellaria, Aug. 14	PERLAK	Hong Kong	Balekappan	L. June 27
ETELKA	Genoa	Batoum	Arr. Aug. 6	PHOEBUS	New York ..	Hamburg ..	Arr. Aug. 10
EUPLECTELA	Philadelphia	Hamburg ..	Sp. Aug. 8, 41 N., 55 W.	PINNA	Antwerp	San Francisco	L. St. Vincent (C.V.), June 13
EXCELSIOR	New York ..	Rotterdam ..	L. Aug. 11	POTOMAC	New York ..	Avonmouth	L. Aug. 1

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For	Latest Date and Position.
PROMETHEUS....	New York ..	Rotterdam ..	Off the Wight, Aug. 14	STROMBUS	Samboe	—	P. Malta, Aug. 10
PRUDENTIA	Batoum	—	P. Perim, July 26	SURAM.....	Tyne	New York ..	P. Butt of Lewis, July 31
QUEVILLY	Rouen and Havre	Philadelphia	L. Havre, Aug. 4	SUWANEE	Hull.....	Sabine	L. Newport News Aug. 2
RION	Port Talbot	Philadelphia	L. Aug. 13	SVIET	Plymouth ..	Batoum	L. Aug. 14
ROCK LIGHT	Cardiff	Port Arthur (Texas)	P. Barry Island, Aug. 4	TELENA	London	—	P. Malta, Aug. 12
ROMANY	London	—	At Port Said, Aug. 7	TEREK.....	Hamburg ..	Batoum	L. Constant'ple, Aug. 6
ROSSIJA	Leith	Archangel ..	L. Aug. 11	TIFLIS	Hamburg & Tyne	Batoum	P. Beachy Head, Aug. 15
ROTTERDAM	Barry	Santos.....	Arr. July 27	TIOGA	Gulf Port ..	Liverpool ..	Arr. Aug. 14
RUSSIAN PRINCE	Philadelphia	Tampico & Vera Cruz	P. Cape May, July 28	TONAWANDA	San Francisco	Shanghai ..	L. July 1
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	TROCAS	Shanghai ..	Singapore ..	Arr. July 14
SAN CRISTOBAL..	Tyne	—	P. Dungeness, July 22	TURBO.....	London and Amsterdam	Batoum	P. Beachy Head, Aug. 10
SAN IGNACIO DE LOYOLA	Pasages	Philadelphia	L. July 9	TUSCARORA	Dublin	Barry	Arr. Aug. 13
SAXOLEINE	Philadelphia	Rouen.....	Arr. Aug. 10	TWINGONE	Rangoon ..	Madras	L. Aug. 1
SEMINOLE.....	San Francisco	Calcutta	At Madras, Aug. 12	VEDRA.....	Yokohama ..	Palembang..	L. July 29
SINGU	—	—	Tr. in East Indies	VILLE DE DIEPPE	Havre	Passage West	Arr. July 29 (For repairs.)
SNOWFLAKE.....	Thameshaven	Philadelphia	P. Lizard, Aug. 6	VOLUTE	Hankow	—	L. July 7
SPONDILUS	Pulo Samboe	—	At Suez, Aug. 14	WASHINGTON....	Hamburg ..	New York ..	L. Tyne, Aug. 7
STANDARD	New York ..	Stockholm ..	L. July 31	WEEHAWKEN	London	Tyne	P. Southend, Aug. 14
				WILLKOMMEN....	Stettin.....	Philadelphia	P. Dunnet Head, Aug. 3
				WINNEBAGO	San Francisco	Yokohama ..	L. July 30

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

August 16th, 1907.

There have been no change in the prices of Refined petroleum since our last, quotations being:—Russian, Spot 6d.; American, Spot 6 $\frac{3}{8}$ d.-6 $\frac{5}{8}$ d.; Water White, 7 $\frac{1}{2}$ d.-7 $\frac{5}{8}$ d.; Roumanian, 6 $\frac{1}{4}$ d.

LUBRICATING OILS.

Present prices are as follow:—

American pale, £7 7s. 6d. to £11.

American dark cylinder, from £8 10s.

American filtered cylinder, from £11 2s. 6d.

Shellene, £5. No. 1 Russian, £10 5s.

TURPENTINE.

This has been a steady market since our last report, prices being practically the same:—American, Spot, 41s. 6d.; September to December, 42s. 7 $\frac{1}{2}$ d.; January to April, 43s. 7 $\frac{1}{2}$ d. to 43s. 9d.

LIVERPOOL OIL MARKET.

August 15th.

Refined oils are quiet, and sellers quote 6 $\frac{1}{8}$ d. for Russian, Galician or Roumanian; and 6 $\frac{5}{8}$ d. to 7 $\frac{5}{8}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0 $\frac{1}{2}$ d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, August 14th.

Refined, in cases, is steady at 10.90; Standard White, 8.45; Credit balances, 1.78c.

PHILADELPHIA, August 14th.

Standard White is still quoted at 8.40.

RUSSIA.

BAKU, August 13th.

The Baku oil market is quiet. Light crude oil, spot, 32 copecs per pood; residuals, in ships 31 copecs; kerosene, in ships, 37 $\frac{1}{2}$ copecs.

BELGIUM.

ANTWERP, August 13th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, August 10th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34.25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, August 10th.

The kerosene market is firm. The price of American Standard White is 7.25 marks per 50 kilos, Russian, 7.00 marks.

ROUMANIA.

August 14th.

Crude oil from different fields, including pipe line charges, per 100 kgs.	Franks.
Refined oil, exclusive of taxes	4.10-4.20
Motor benzine, including taxes	8.00- —
Benzine, doubly refined	23.00-24.00
Residuals in tank waggons, at refinery	25.00-26.0
Paraffin	3.60-3.700
	120.00-125.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.50- —
Benzine, sp. gr. 0.710-0.715	23.00-24.00
" sp. gr. 0.715-0.720	22.00-23.00
" sp. gr. 0.730-0.740	15.00-16.00
" sp. gr. 0.745-0.755	11.00-12.00

INDIA.

BOMBAY, July 23rd.

Market strong.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg.	Rs. 6 0 2
" Chester, 125 deg.	4 8 2
" Monkey Brand, 125 deg.	4 2 2
" Bulk, 125 deg. (in local made tins)	3 11 0
" 125 deg. (8 Imperial gallons)	3 1 0
" "White Camelia" brand, 125 deg.	No stock.

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair	3 7 0
Sumatra "Rising Sun," bulk, per unit	3 1 0
" tins, per pair	3 11 0
Silverlight cases, per case	5 2 0
Sumatra, "Anchor" per case	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

*Specially prepared for
this Journal by . . .
the Custom House.*

FOR THE WEEK ENDED 5TH AUGUST, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
July.	LONDON—			
30	Scott's Wharf	Lub.	5,200	New York
30	Anglo-American Oil Co. (Narragansett)	"	260,880	"
30	"	Lamp	1,648,500	"
30	"	Gas	1,072,860	"
30	" (Ottawa)	"	975,570	Sabine
30	British Petroleum Co. (Margaretha)	Lamp	408,000	Batoum
Aug.	" (Rion)	Gas	996,330	Philadel.
1	Fielder, Hickman and Co...	Lub.	1,600	New York
1	London & India Docks Co...	"	3,200	Hamburg
1	Mordaunt Bros.	Lamp	9,230	"
1	Wilkins, Campbell and Co.	Lub.Gr.	400	Antwerp
1	Lubricating & Fuel Oils, Ltd.	Lub.	8,200	"
1	Anglo-American Oil Co. ..	"	23,440	New York
1	T. H. Lee	"	630	Hamburg
2	British Petroleum Co. (James Brand)	Gas	1,429,120	Kustendje
2	British Pet. Co. (Kura) ..	"	887,040	Batoum
2	Schlieman's Oil Co.	Lub.	9,800	Philadel.
2	Perkins and Homer	"	4,000	"
2	Fielder, Hickman and Co...	"	33,600	"
3	Scott's Wharf	"	2,000	New York
3	London and India Docks Co.	"	600	"
3	Anglo-American Oil Co. (Lackawanna)	Spirit	794,380	Bengkalis
3	Schlieman's Oil Co.	Lub.	1,250	St. Petersburg
3	T. H. Lee	"	90	Hamburg
3	O. Gerdes Hansen and Co...	"	1,000	Philadel.
July.	LIVERPOOL—			
30	Meade-King, Robinson & Co.	"	1,000	Hamburg
30	H. E. Cook	Lub. Gr.	700	"
30	George B. Taylor	Lub.	4,100	New York
30	Crew, Levick and Co.	"	2,190	Philadel.
Aug.	"			
1	Meade-King, Robinson & Co.	"	4,800	Toledo
1	E. Harrison and Co.	"	32,000	Philadel.
1	American Line	"	3,600	"
1	Bowring Petroleum Co.	"	1,040	"
1	Crew, Levick and Co.	"	7,780	"
1	George B. Taylor	"	54,800	"
1	Meade-King, Robinson & Co.	"	4,000	"
1	"	Pet. Spirit	24,970	Rotterdam
3	Vacuum Oil Co.	Lub.	2,400	Philadel.
3	W. B. Dick and Co.	"	1,990	"
	BRISTOL—			
1	Pickford's	"	220	Antwerp
3	"	"	1,340	Hamburg
	HULL—			
1	F. B. Grotrian and Co. ..	Tar oil	2,000	Archangel
1	Hull & Netherlands S.S. Co.	"	2,400	Rotterdam

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Aug.				
1	Wilson's and N.E. Railway Shipping Co.	Lub.	780	Hamburg
1	"	"	120	Christiania
1	"	"	760	Antwerp
1	"	"	240	"
1	"	"	8,240	"
2	British Pet. Co. (Suram) ..	Lamp	412,500	New York
	MANCHESTER—			
1	J. T. Fletcher and Co. ..	Lub.	800	Antwerp
1	"	"	240	"
1	Anglo-American Oil Co. (Cuyahoga)	Lamp	693,080	Philadel.
2	Manchester Liners	Lub.	2,400	"
2	Worthington and Boler ..	"	5,670	"
2	Geo. B. Taylor	"	80,960	"
3	"	"	480	Hamburg
	MIDDLESBRO'—			
1	J. J. Sutherland	"	920	Antwerp
	NEWCASTLE—			
1	Tyne-Tees Steamship Co. ..	"	880	"
1	"	"	810	Hamburg
	PLYMOUTH—			
1	T. Nicholson and Co.	"	30	"
	SWANSEA—			
1	Ragosine and Co.	"	1,000	New York
1	Bristol Steam Nav. Co. ..	Lub. Gr.	200	Antwerp
	GLASGOW—			
1	Clyde Shipping Co... ..	Lub.	200	"
1	Anchor Line	"	61,560	New York
3	J. D. Smellie	Naphtha	15,000	Rotterdam
	LEITH—			
1	G. Gibson and Co.	Lub.	2,160	Antwerp
1	J. Currie and Co.	"	1,280	Hamburg
1	W. Graham-Yooll and Co...	Lamp	1,660	"
July.	BELFAST—			
25	J. C. Pinkerton and Co. ..	Lub.	130	"
Aug.	"	"	270	"
	DUBLIN—			
1	Palgrave, Murphy and Co.	"	170	Antwerp
	Total for Week		10,020,790	
	Deduct to Correct :—			
	BARROW—			
1/7	Anglo-American Oil Co. (Weehawken)	Naph.	9,090	New York
1/7	"	Benzine	5,370	"
	BRISTOL—			
25/7	J. C. Pinkerton and Co. ..	Lub.	130	Hamburg

MIDLAND RY-CARRIAGE & WAGON CO., LTD., & Reduced.

Midland Works,
BIRMINGHAM.

—BUILDERS OF—

OIL AND OTHER

TANK WAGONS,

And Every Description of Rolling Stock

With WOOD or STEEL

UNDERFRAMES.

Anglo-American Oil Co., Ltd.,

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FOR THE WEEK ENDED 12TH, AUGUST, 1907—

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Aug.	LONDON—			
6	A. Brown and Co. ..	Lub.	4,800	Hamburg
6	Lub. and Fuel Oils, Ltd. ..	"	5,740	"
6	London and India Dock Co. ..	"	2,720	"
6	Page, Son and East ..	"	160	Antwerp
7	G. W. Sheldon and Co. ..	"	1,500	New York
7	Fielder, Hickman and Co. ..	"	10,800	"
7	G. and H. Green ..	L. Comp.	1,000	"
7	Anglo-American Oil Co. ..	Lub.	110,360	"
7	" ..	"	28,200	Philadel.
7	Livett Frank and Sons ..	"	1,680	"
7	Bowring Petroleum Co. ..	"	9,200	"
7	" ..	"	2,010	Naples
8	A. Brown and Co. ..	"	15,560	Philadel.
8	Page, Son and East ..	Lub. Gr.	280	Antwerp
8	Worthington and Boler ..	Lub.	6,800	Philadel.
10	Page, Son and East ..	"	2,200	"
10	Produce Brokers' Co. ..	"	4,800	"
10	Lub. and Fuel Oils Co. ..	"	10,660	"
22	Ragoline and Co. ..	"	4,870	"
10	Mordaunt Bros. ..	"	2,500	"
10	A. Brown and Co. ..	"	2,000	Hamburg
10	Argo Steamship Co. ..	"	80	Bremen
10	C. Price and Co. ..	"	240	Antwerp
10	A. C. Hitchcock ..	"	110	Dunkirk
12	London and India Docks Co. ..	"	5,760	Hamburg
12	Schenker and Co. ..	"	770	Antwerp
12	Lubricating & Fuel Oils, Ltd. ..	"	8,200	"
12	H. Funck and Co. ..	Gas	80	Kustendje
12	Anglo-American Oil Co. ..	"	604,050	Philadel.
	(Weehawken)			
12	" ..	Lub.	50,800	"
12	London and India Dock Co. ..	"	1,620	New York
12	Mordaunt Bros. ..	"	5,000	"
12	Schlieman's Oil Co. ..	"	5,000	"
	LIVERPOOL—			
6	Worthington and Boler ..	"	1,200	Philadel.
6	W. Gibson and Sons ..	Lamp	2,050	Boston
6	Liverpool Storage Co. ..	Lub.	60,160	New York
6	" ..	M. Colza	4,960	"
6	G. B. Taylor ..	Lub.	1,000	"
7	W. B. Dick and Co. ..	"	12,420	"
7	Fredk. Leyland & Co. (1900) ..	"	330	N. Orleans
7	Jas. Light and Sons ..	"	240	Antwerp
8	Pickfords, Ltd. ..	"	990	Hamburg
8	W. B. Dick and Co. ..	"	4,230	Philadel.
8	Crew, Levick and Co. ..	"	4,820	"
8	Worthington and Boler ..	"	5,600	"
8	Meade-King, Robinson & Co. ..	"	44,000	"
9	Midland Railway ..	"	2,000	"
9	Crew, Levick and Co. ..	"	2,350	"
9	Stockdale and Doel ..	"	5,230	Boston
9	Vacuum Oil Co. ..	"	10,000	"
9	A. Hopps and Sons ..	"	10,000	Baltimore
9	" ..	M. Colza	5,000	"
10	Meade-King, Robinson & Co. ..	Lub.	2,400	"
12	W. B. Dick and Co. ..	"	6,480	Philadel.
12	" ..	"	28,480	New York
12	Geo. B. Taylor ..	"	34,400	"
12	Valvoline Oil Co. ..	"	1,640	"
12	" ..	"	6,150	"
12	E. H. Kellogg and Co. ..	"	2,400	"
	BARROW—			
12	Anglo-American Oil Co. ..	Spirit	414,780	Sumatra
	(Lackawana)			

DATE	PORT AND IMPORTERS	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Aug.	BRISTOL—			
8	W. Smith and Co. ..	Lub.	19,680	New York
8	H. R. James and Sons ..	"	6,000	"
8	" ..	M. Colza	800	"
8	Anglo-Bosphorus Oil Co. ..	Lub.	160	Hamburg
10	E. Stock and Sons ..	"	2,000	"
10	H. R. James and Sons ..	"	12,200	New York
10	" ..	M. Colza	5,800	"
	GRIMSBY—			
8	J. Sutcliffe and Son ..	Lub.	260	Antwerp
8	" ..	"	90	"
	HULL—			
9	T. Meredith, Roberts and Co. ..	"	500	"
9	W. Gilyott and Co. ..	"	69,360	New York
9	Wilsons and N.E. Railway. Shipping Co. ..	"	3,080	"
9	" ..	"	2,100	Hamburg
9	" ..	"	1,080	"
9	" ..	"	760	Antwerp
9	" ..	"	120	"
12	" ..	Naph.	240	St. Petersburg.
	MANCHESTER—			
8	Crew, Levick, and Co. ..	Lub.	19,870	Philadel.
8	" ..	M. Colza	4,360	"
8	Liverpool Storage Co. ..	Lub.	8,050	"
8	Meade-King, Robinson & Co. ..	"	46,640	"
8	" ..	Lamp	20,000	"
8	" ..	M. Colza	4,000	"
8	C. H. Morton and Sons ..	Lub.	3,200	"
8	J. T. Fletcher and Co. ..	"	940	Antwerp
9	British Pet. Co. (Cymbeline) ..	Lamp	1,669,800	Philadel.
10	Manchester Liners ..	Lub.	1,000	"
	MIDDLESBRO'—			
8	E. Harris and Co. ..	Lub.	1,920	Antwerp
	NEWCASTLE—			
8	Tyne-Tees S.S. Co. ..	"	1,040	"
	PLYMOUTH—			
9	Gas Co. (Weehawken) ..	Gas	507,000	Philadel.
	SOUTHAMPTON—			
8	White Star Line ..	Lub.	250	New York
	GLASGOW—			
8	Anchor Line ..	"	39,120	"
8	" ..	M. Colza	5,000	"
8	Clyde Shipping Co. ..	Lub.	120	Antwerp
9	J. and A. Allan ..	"	105,960	Philadel.
9	" ..	M. Colza	6,000	"
	GRANGEMOUTH—			
8	G. Stephenson and Co. ..	Lub.	480	Antwerp
	LEITH—			
8	G. Gibson and Co. ..	"	720	"
	CORK—			
8	Palgrave, Murphy and Co. ..	"	120	Hamburg
	DUBLIN—			
10	Anglo-American Oil Co. (Tuscarora) ..	Lamp	1,955,450	New York
	Total for Week ..	"	6,108,130	
	Total for the Fortnight ..	"	16,128,920	

Telegraphic Address:—"OLEINE."

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVII. (New Series.)

AUGUST 31ST, 1907.

No. 406.

Editorial Notes.

Matters upon the English oil market *The English Oil Market.* are exceptionally quiet. Prices have been steady for some little time past, values in London representing about 6d. per gallon for Russian oil in barrels, with Pennsylvanian oil about a halfpenny more. These quotations apply principally to London, for in the north—Manchester and Liverpool for instance—values are somewhat higher, approximately one halfpenny per gallon more. We doubt very much whether such prices are at present paying the cost of the oil with the high freights now ruling, and seeing that Russian oil to-day is not less than 60 copecs per pood, f.o.b. Batoum, it seems to us that the English importers are losing very heavily even at the present prices. We should imagine that such a position as that prevailing at the export ports is bound to call for even higher prices on this side—such an increase seems almost imperative.

The Growth of Petroleum Consumption in England. The petroleum trade in the United Kingdom has reached a period when it can look back upon fifty years of solid progress. In the early sixties, the importation of petroleum products into our island home began to take its place as a branch of international commerce, and from that now remote time our oil trade has steadily and continuously progressed. Fifty years ago, the volume of trade done in petroleum products in this country was not worthy of a separate classification in the returns of trade: to-day, the United Kingdom receives something like 300,000,000 gallons annually. American oil has been upon our markets for this lengthy period, but Russian oil has only enjoyed a quarter-of-a-century's trade with us, for twenty-five years ago, out of the 60,000,000 gallons of petroleum products arriving at our various ports, Russia only send about 700,000 gallons, the rest all coming from the Pennsylvanian fields. When one looks back to the very small things from which our present day oil trade has sprung, it must be admitted that in spite of keen competition in many directions, oil has more than held its own.

The Unfortunate Russian Petroleum Company. On Tuesday last, the holders of preference stock in this now most unfortunate of concerns were called together by the directors for the purpose of listening to a scheme which had been drawn up by the board and of passing a resolution authorising the use of the investments of the reserve fund for the carrying out of the scheme. In times past, it has frequently been the privilege of the shareholders to hear many schemes propounded by the directors, and so there was little or nothing unusual in their being again called together to

give their sanction to this latest of all schemes which was expected to lift the company from its present miserable plight. But from what the preference shareholders have learned of late regarding the fund which was undoubtedly established for their security, it was evident that the meeting would be more than usually lively, and so it turned out to be. The shareholders assembled prior to the meeting, and had a semi-private conference among themselves, when under the able presidency of Mr. A. Levy Lever, M.P., it was decided that a strong concerted action should be taken in order that their interests might be protected.

For once it must be admitted that the *A Pure Fiasco.* designs of the board were thwarted, and the manner the undignified position of the directors was explained away would have been exceedingly humorous had the matter not been so serious. The announcement of the chairman almost at the very commencement of the meeting was one of the most remarkable statements he has ever made—and they have not been a few. It was to the effect that seeing there would be opposition to their proposal, this would not be put before the shareholders. Thus the preference shareholders had in many cases been brought long distances to consider and, if thought necessary, to give their sanction to a scheme which, after all, the directors preferred not to put to the meeting. Ultimately, however, some brief outline of this mysterious scheme was mentioned, but the quite unjustifiable attitude of the board was not even explained by the chairman, and the meeting closed as being one of the purest fiascos ever associated with any company. Our report upon other pages gives a good idea of the discussions which took place, and we can only say that Tuesday's was useful if only as shewing the sincerity and strength of the now organised opposition on the one hand, and the absolute incompetence of the directors on the other, who appear not to even have the courage of their own convictions and place before their shareholders what they admit to be the outcome of many months' deliberation, and for which the whole of the board still draw their fees.

Taken all round, the oil market *The Roumanian Oil Market.* in Roumania is in a very healthy condition. The price of crude oil remains stationary, though crude is in good demand, but lubricating oils are experiencing a very slow sale in the interior owing to the poor crops. The consumption of benzine in Roumania is growing, chiefly owing to the general adoption of the use of benzine motors for industrial purposes, and also at the oil fields. Residuals continue to enjoy a good demand, thanks to the comparatively high price of coal, which at Bucarest is 54 francs per ton, whilst fuel oil costs only 42 francs. The residuals have the further advantage of possessing 50 per cent. more heating power than coal.

The price of illuminating oil remains unchanged. It is probable that when the season of greater consumption of this oil begins, the price of export kerosene will go up, provided the firm tone now prevailing on the foreign markets continues. The demand for benzine for export continues to grow, and, although prices have lately somewhat declined, the prospects are excellent. Generally speaking, the petroleum export trade is very active.

A FEW FACTS CONCERNING THE TILBURY OIL FIELD OF CANADA.

Of all the oil localities in Canada, the one to which the greatest attention is at present being paid is that of Tilbury, and the fact that during last month—August—the production was no less than 36,000 barrels shews how successful that activity is.

At present the oil district stretches for a distance of ten or twelve miles, with a width varying from five miles upward. To-day there are in this region 235 producing wells, and 30 more wells are being drilled, so there is every reason to believe that in a short time the production will increase. As a rule, the oil is found at about 1,400 feet, which makes the field the only one for deep wells in Ontario, since in Petrolia the oil is found at less than 500 feet deep. The depth of the Tilbury wells correspond to those in the Lima oil field, some contending that the strata has a continuation from one spot to the other, for it is quite similar.

Along the southern part of the known district there are gas wells of great pressure. Comparatively few wells have been bored in the gas region, because at present there is no market for the gas product. Manufacturers in Chatham are now using gas at 10 cents a thousand cubic feet, while domestic consumers are also being supplied at Merlin, Tilbury and Chatham at a very low rate. Companies have secured franchises in many of the surrounding towns, and are now busily engaged in laying the pipes through which the gas will be conveyed to its point of consumption.

An Omission:—In a recent issue of the REVIEW, we published an article dealing with the Galkin patent lamp, but we regret that owing to an oversight we omitted to mention that our friends, the Baltic Trading Co., Ltd., of 4, Lime Street Square, E.C., are the sole agents for the United Kingdom and Colonies for all the Galkin lamps.

LONDON OIL SHARE MARKET.

FRIDAY, AUGUST 30TH, 1907.

The improvement commented upon in our last issue continues to manifest itself in nearly every section of the Stock Exchange, and the grave apprehensions so prevalent during the preceding fortnight are being gradually replaced by a feeling of security.

In the Oil Share Group, although we have no important alterations to record, the fall has been arrested, and the section remains in a state of suspended animation.

The first alteration from the figures published in our last issue was in Shell Transport Ordinary, which on the following Wednesday lost 3d. at 44s. 3d. to 45s. 3d., and on the following day declined 1s. 9d. further, closing on balance no better than 42s. 6d. to 43s. 6d. The price recovered 6d. on Friday, and the only change since occurred on the Wednesday of this week, when a few buying orders put up the price to 44s. 6d. to 45s. 6d.

On Thursday, the 22nd, Californian Oilfields fell $\frac{1}{8}$ to $5\frac{1}{2}$ - $5\frac{3}{4}$, remaining stagnant at this figure until the 29th, when they recovered to $5\frac{5}{8}$ - $5\frac{7}{8}$, and to-day marked a further advance of $\frac{1}{8}$ at $5\frac{3}{4}$ -6. The only other movements have been changes in European Petroleum First Mortgage Debentures from 75-79 to 73-77, and in the Second Mortgage a similar amount at 35-40 from 37-42, while yesterday Schibaieff Preference on a few shares changing hands lost $\frac{1}{4}$ at $1\frac{1}{4}$ - $1\frac{1}{2}$.

At the end-August settlement there was practically little or no business to be adjusted in the miscellaneous section, and rates of interest charged for the continuation of shares were light.

A comparison of Oil Share making-up prices with those fixed at the mid-month account shews no advance whatever, the dealings marked embracing the shrinkage recorded in our last issue.

Californian Oilfields were $\frac{3}{16}$ lower at $5\frac{5}{8}$. Shell Transport Ordinary lost 2s. 3d. at $2\frac{3}{16}$. Russian Ordinary at $\frac{1}{4}$, and Anglo "A" at 2s., losing 6d. each, while Baku Ordinary at 3s. 3d. and the Preference at 5s. 6d. are both 3d. easier. Russian Preference at 6s., Schibaieff Ordinary at 4s. 6d., Preference at $1\frac{5}{8}$, and Spies at 7s., all being without change.

Latest prices of Oil Shares will be found on page 124.

THE OPERATIONS OF THE BAKU REFINERIES.

STATISTICS FOR FEBRUARY, 1907 (in poods).

I.—MANUFACTURE OF ILLUMINATING OILS.

Distillation.

	Submitted to Distillation.			Products Received.				
	Crude.	Other Products.	Total	Kerosene.	Residuals.	Other Products.	Loss.	Fuel used.
February	22,526,118	256,702	22,782,820	5,962,424	15,203,355	1,060,451	556,590	731,375

Refining.

	Submitted to Refining.			Refined Product Obtained.				Chemicals used.	
	Kerosene	Other Distillates.	Total.	Kerosene	Other Products.	Total.	Loss in Refining.	Acid.	Soda.
February	5,643,154	122,698	5,765,852	5,509,005	112,163	5,621,168	144,684	33,852	10,589

II.—MANUFACTURE OF LUBRICATING OILS.

Distillates Received.

	Machine Oil.	Spindle Oil.	Cylinder Oil.	Goudron.	Solar Distillates.	Residuals.	Other Distillates.	Loss in Distilling.	Fuel used.
February	922,145	123,580	67,369	1,218,270	1,060,589	582,443	80,149	82,866	611,325

Refined Products Received.

	Spindle Oil.	Machine Oil.	Cylinder Oil.	Loss in Refining.	Chemicals used.	
					Acid.	Soda.
February	105,593	836,531	37,627	111,645	30,823	3,988

The output of benzine distillates amounted to 45,205 poods. The output of refined benzine was 37,000 poods.

The Third International Petroleum Congress at Bucarest.

PROGRAMME AND
FULL DETAILS. . .

AN ASSURED SUCCESS.

We are on the eve of the holding of the Third International Petroleum Congress at Bucarest, Roumania, and it is now safe to prophecy that the gathering will be attended with marked success, while from the point of view of its importance, it will rank far before its two predecessors - the Paris and Liège Congresses of 1900 and 1905 respectively.

Everything that could be done to ensure the Congress being of real and practical value, has been carried out by the members of the Roumanian Committee, who have worked most loyally for the cause, and the result is that the discussions which will take place, and the papers which will be presented by eminent gentlemen connected with the petroleum industry in all parts of the world, are bound to not only be exceedingly interesting, but of the greatest permanent value.

The fact of the Congress being for the first time held in a promi-

nent petroleum producing country, has added greatly to its attractiveness, and as a consequence the number of delegates attending the various sessions will be much larger than upon the last two occasions, yet it will come as a general surprise to find that no less than seven hundred delegates will take part in the deliberations, and of this number almost one-half are representing foreign countries. At the beginning of this week, the lists for the inclusion of members were closed, for owing to the great number of gentlemen who are to attend, additional arrangements and facilities have had to be made by the Roumanian Committee, almost at the last moment.

For many months the Roumanian Committee has been most assiduously working in order that the arrangements for the comfort and enjoyment of the delegates may be thoroughly satisfactory, and had we space the names of many well-known gentlemen might be mentioned as having laboured most ungrudgingly in this respect.

Our *confrere*—M. Mancas—was the first gentleman in Roumania to kindle the fire of enthusiasm among those interested in the petroleum industry, on behalf of this third International gathering. When in July, 1905, at Liège, it was decided that the next Congress should take place in Roumania, every one looked forward to a combined effort being put forth by the members of the Roumanian industry to arrange a Congress which would be worthy not only of Roumania—that most enterprising of petroleum producing countries—but of the petroleum industry as a whole, yet for fourteen months afterwards

the matter received no consideration, and nothing was done by way of advancement of the idea. But in September of last year, Mr. Mancas addressed a letter to Mr. Alimanestianu, the President of the Roumanian Petroleum Association, which made the position quite clear, shewing as it did that the success of the third Congress



THE ATHENÉE PALACE, WHERE THE CONGRESS OPENING TAKES PLACE.

might be seriously jeopardised if no steps were immediately taken to push arrangements forward.

The letter of Mr. Mancas is too lengthy to publish here, yet one or two sentences of it shew the spirit in which it was written and the enthusiasm of the writer in a movement which has for its object the uplifting and bringing into a position of greater importance the petroleum industry. Mr. Mancas said: "Seeing that so much precious time has already been lost without anything having been done, it is necessary that all energies should be concentrated in order that we might in the short space of time which is still left unite our efforts to bring the Congress up to its proper height. I am convinced that success can be assured if the action of the Ministry were joined by the energetic action of the Petroleum Association, which includes in itself all the elements which are apt to ensure the success of the object which we are pursuing. If there is not at once a simple and practical programme of action drawn up,

the execution of which can be commenced without delay, we need not cherish any great illusions over the future Congress."

Mr. Mancas made his strong appeal in time; Mr. Alimanestianu saw the position, and the matter was brought before the Roumanian Petroleum Association. From that day until the present, the most sanguine hopes of our *confrere* have been brought nearer realisation until to-day we see to what a state of perfection the multifarious arrangements in connection with the Congress have attained. From the highest to the most humble member of the Roumanian Committee, that fire of enthusiasm kindled by Mr. Mancas has grown the stronger, and to the credit of all concerned, it can be truly said that the Third International Petroleum Congress at Bucarest will assume an importance far greater than either of its predecessors.

But there are many gentlemen whose arduous work in the Congress arrangements calls for the greatest praises. There is Dr. Edeleano without whose untiring efforts the Congress would have lost much of its success, and Mr.

Alimanestianu, the President of the Roumanian Petroleum Association, whose work as the General Secretary of the Congress has been most difficult, while our esteemed friends Mr. A. Blazy, Prof. Mrazec and Dr. Schwarz have all done everything in their power.

The Congress proper

opens on Sunday, the 8th September, in the Athenée Palace, a view of which we publish on this page, but the round of enjoyable and profitable excursions that has been arranged for the delegates will commence next Thursday when the principal petroliferous centres of Roumania will be visited. On that day the delegates will leave Bucarest for an inspection of the localities of Baicoi, Tzintea and Bustenari, while on the Friday they will journey to Campina and Poiana Vrajitorea.

The following may be taken as the official programme of the Congress:—

Saturday, 7th September, at 9 p.m.—Reception of members of Congress in the Salons of the Ministry of Foreign Affairs.

Sunday, 8th September.—Formal opening of the Congress at 10.30 a.m. in the Athenée Palace. In the afternoon a visit will be paid to the Exhibition, and in the evening there will be a gathering in the Oteteleschano Park.

Monday, 9th September.—From 9 a.m. to noon

meetings. From 3 to 6 p.m., meetings. In the evening a banquet will be given by the Mayor of the Capital, to which all the delegates are invited.

Tuesday, 10th September. — Excursion to the Prahova Valley to visit the oil fields. Departure at 6 o'clock in the morning from the Northern station. Visit to Campina, Bustenari, Sinaia, and the Royal Castle at Pelesh. A return to Bucarest will be made the same evening.

Wednesday, 11th September.—From 9 a.m. to noon, meetings. From 3 to 6 p.m., meetings. Simultaneously with these meetings an excursion will be organised to the salt mines at Slanio for members who may desire to see them.

Thursday, 12th September.—From 9 a.m. to noon, meetings. In the evening a banquet will be given by the Roumanian Petroleum Association to the Congress delegates.

Friday, 13th September.—From 9 a.m. to noon, meetings. In the afternoon,

the closing meeting of the Congress will take place. In the evening a banquet will be given by the Minister of Industry, Commerce and Agriculture.

Saturday, 14th September. — Excursion to Constantza. At 6 a.m. the delegates will de-

part from Bucarest for Guirgevo, and at 7.30 a.m. board a steamer at Guirgevo for a trip on the Danube to Cernavoda, arriving at Constantza in the afternoon. In the evening a banquet will be given by the Prefect of the District and the Mayor of the town of Constantza.

Sunday, 15th September.—In the morning the delegates will visit the port of Constantza and the petroleum harbour, and in the afternoon will visit the Mamaia beach. In the evening a banquet will be given by the Commissioners of the port of Constantza.

Headed by His Royal Highness Prince Ferdinand as Patron of the Congress, the General Roumanian Committee is as under:—

Honorary President:—The Minister of Domains, Mr. Anton Carp.

President:—Mr. A. Saligny, Engineer Inspector-General, President of the Romanian Academy.

Vice-Presidents:—Messrs. V. I. Bratiano, Dr. L. Mrazec, Dr. L. Edeleano, Mr. G. Spies, of the Steaua Romana Co.; Mr. H. O. Schlawe, of the Bustenari Co.; Mr. A. Raky, of the Regatul Roman Co.; I. G.



THE HOME OF THE CONGRESS.—THE UNIVERSITY OF BUCAREST.

THE ROYAL HOUSE OF ROUMANIA.



KING CHARLES I.



QUEEN ELIZABETH.

117



HER ROYAL HIGHNESS—PRINCESS MARIE.



HIS ROYAL HIGHNESS—PRINCE FERDINAND.

Cantacuzino, of the Petro-lifera Co.; and Mr. D. Dobrescu, of the Sperantza Co.

General Secretary:—Mr. C. Alimanestianu, Engineer-in-Chief.

Secretaries of Sections:—Dr. G. Murgoci, Mr. I. Tanasescu, and Mr. C. Osiceanu.

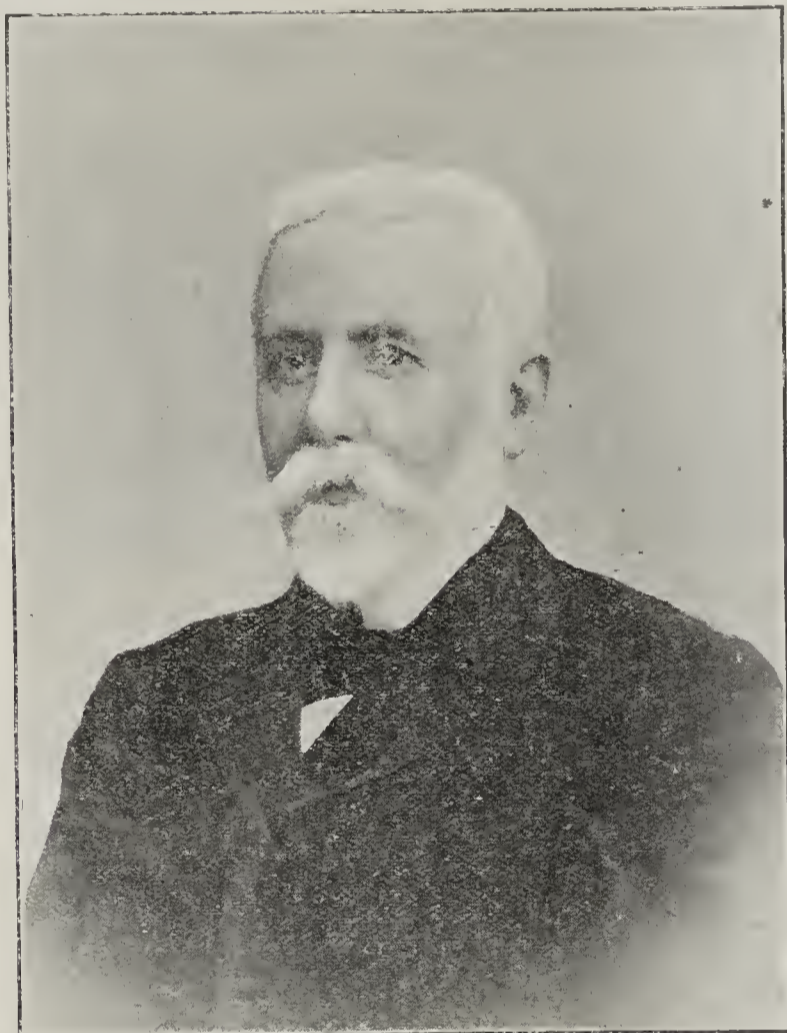


The Congress General Secretary—
MR. C. ALIMANESTIANU.

Petroleum Maatschappij, Colombia Co., Gallo-Romana Co., Ialomitza Co., Hollandsch-Rumeensche Maatschappij, Nederlandsch-Rumeensche Maatschappij, O. Jaumotte and Co., Matitza Co., Dambovitza Co., C. M. Pleyte, Italo-Roumanian Co., Oltenia Co., Seceleanu Bros., Grigorescu and Vladescu (Nafta Co.), G. Stefanescu and Co., A. Loewenbach and Co., Eberhard, Marchena and Co., Alpha Co., I. Grigorescu and N. Cesianu.

Dr. Lossen, Messrs. N. Cucu-Starostescu, Kertsch-Penescu, Ilie Solacoglu, C. R. Mircea, Muller, M. Cantacuzino, Paul Greceanu, L. L. Catargiu, Dr. Kiessling, Dr. Pfeiffer, R. G. Costinescu, Dr. Aisinman, Dr. Moeller, Dr. Poltzer, V. Iscu, V. Tacit, I. Ghica, V. Torocanu, I. Gheorghiu, A. Dinopol, N. Poinaru-Iatan, E. Baum, Iaroslavici, Barbacioru, Riessdorfer, Metianu, Pantazi, Braescu, Balasinovici, Hoiescu, Kamner, and M. K. Ozinga.

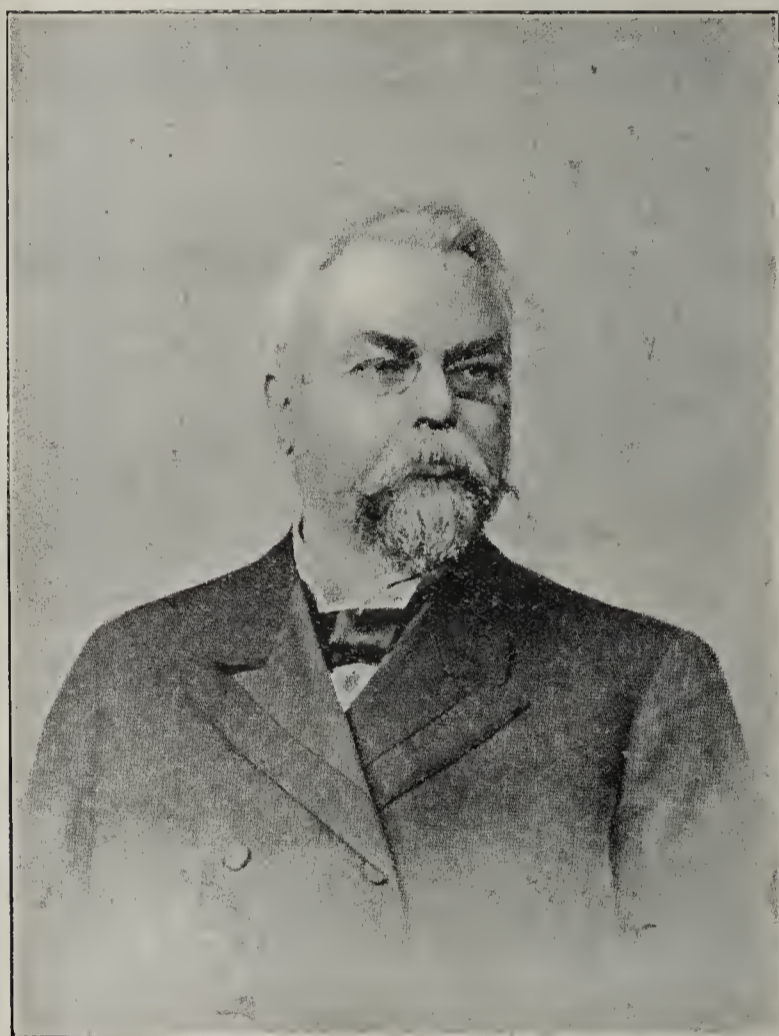
The Roumanian Academy, the Rectors of the



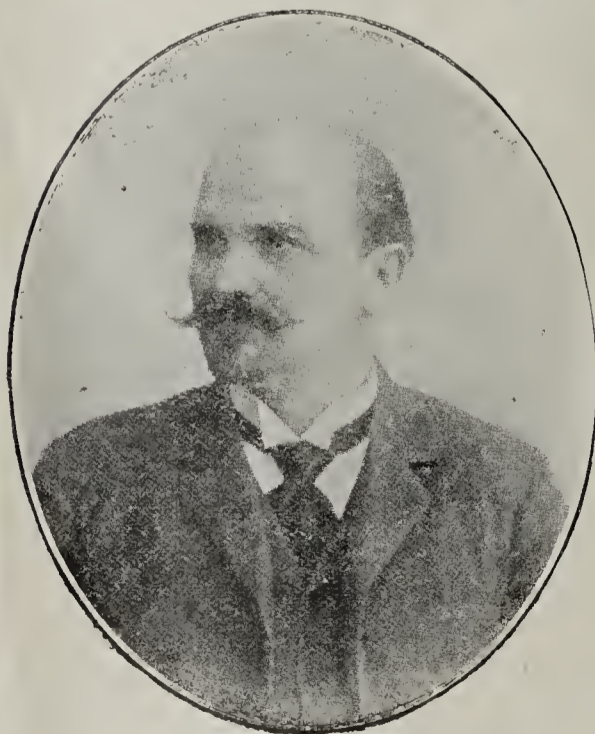
M. ANTOINE CARP, *Minister of Domains.*
(*The Hon. President of the Congress.*)

Honorary Members:—Mr. I. Kalinder, P. P. Carp, P. S. Aurelian, Ion Lahovary, Petri Poni, C. Istrati, B. Missir, C. I. Stoicescu and N. Filipescu.

Members: At the Ministry of Domains:—The General Secretary and the Inspector-General; At the Geological Institute:—Dr. S. Atanasiu, Dr. L. Teisseyre, Popovici-Hatzeg, R. Pascu, Engineer-in-Chief; At the Mining Department: Mr. V. Puscariu; At the Department of Industry:—N. Paianu; Ministry of Public Works:—The Secretary General, the Directors of the Departments of State Railways, River Navigation, Maritime Service, Hydraulic Service; At the Ministry of Finance:—The Secretary-General, Directors of Department of Direct Taxation, Department of Customs, Department of State Monopolies; Other members are:—The Petroleum Association, Credit Petrolifer, International Co., Aurora Co., Vega Co., Trajan Co., Romano-American Co., Aquila Franco Romana Co., Arnheemsche



M. ANGHEL SALIGNY.
(*President of the Congress.*)



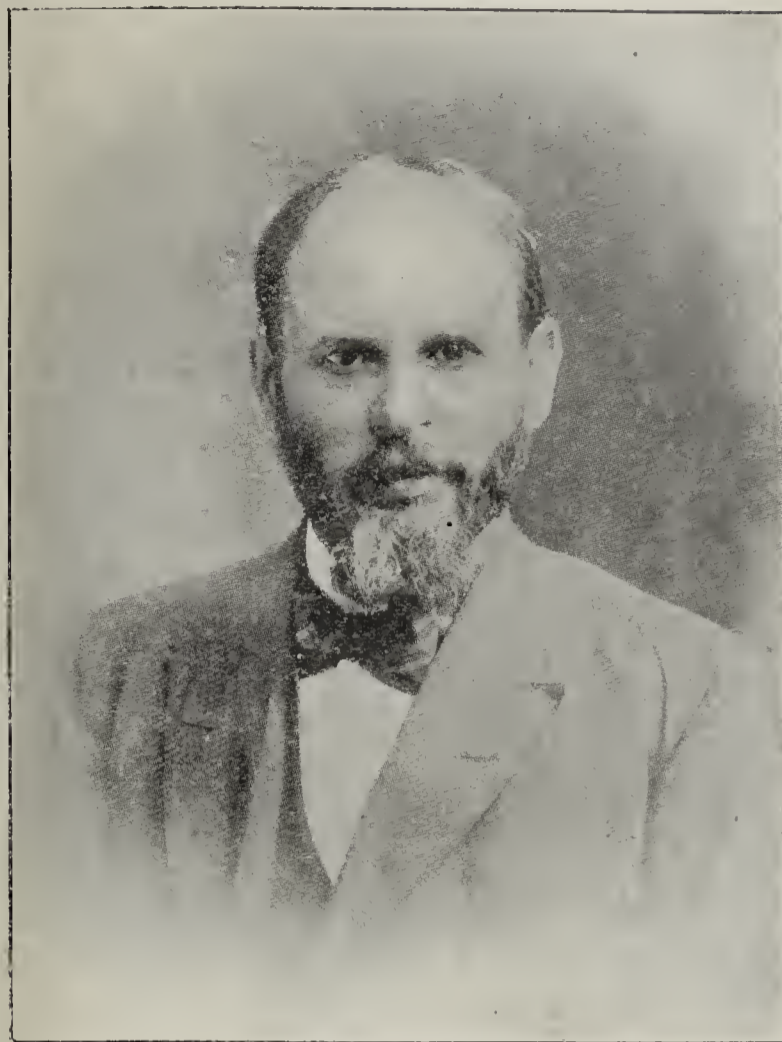
PROF. L. MRAZEC.
(*One of the Congress Vice-Presidents.*)

Universities of Bucarest and of Jassy, the Doyens of the Faculties of Science of Bucarest and Jassy, Professors G. Stefanescu and S. Stefanescu, of Bucarest University; Professors Obreja and Simionescu, of the University of Jassy; Dr. Zaharia and

PROMINENT MEN WHO
. . . HAVE MADE THE CONGRESS.



M. VINTILA T. BRATIANO.
(Vice-President of the Roumanian Committee.)



DR. PAUL DVORKOVITZ.
(The Founder of the International Petroleum Congresses.)



M. N. MANCAS.
("Moniteur du Petrole Roumain.")



DR. L. EDELEANU.
(One of the Congress Vice-Presidents.)

Dr. Longinescu. The Director of the Superior Sanitary Service.

The Mayors of Bucarest, Ploesti, Campina, Constanza and Tergoviste.

The Prefects of the Districts of Ilfov, Prahova, Constantza and Dambovitza.

The Rural Credit Bank, the Administrations of Crown Domains, and the Civil Hospitals Trust.

Banks:—National Bank, General Bank, Marmarosch, Blank and Co., the Bank of Roumania, Ltd., Discount Bank, Banque du Credit Roumain, Commercial Bank.

Delegate for the Special Press:—Mr. N. Mancas.

The latest information we have received from Bucarest shews how assiduously the Roumanian Committee is working even up to the last moment to make the stay of the delegates in Bucarest as pleasurable as possible, for we now learn that in addition to the luncheons to be given to the Congress members at the oil fields, banquets in their honour will be arranged. One of these is to be given by the Minister of Domains—M. Antoine Carp—on behalf of the Government in the Salons of the Ministry of Foreign Affairs; another by Mr. Vintila Bratianu, the Mayor of Bucarest, at the National Theatre, and one by the Association of Petroleum producers, which will be held in the Palace of Arts of the Jubilee Exhibition, while Mr. Anton Raky will offer the members a luncheon and dinner during their visit to the oil fields—one in Poiana, and the other at Moreni.

The Organisation Committee are preparing a very elegant album, comprising 48 of the most interesting views of the oil fields, a copy of which will be presented to each foreign member of the Congress, while another album is being prepared to be distributed to each member of the Congress.

The arrangements for the reporting of the Congress are most complete, and during the days when the Congress is sitting, our enterprising contemporary, the *Moniteur du Petrole Roumain*, will issue a daily edition of the various discussions.

Needless to state, the next issue of the REVIEW will contain a full account of the Congress, which will be specially illustrated. For the illustrations in our present issue, we are greatly indebted to Mr. Mancas, who has kindly loaned the photographs from which the various illustrations are taken.

A SCIENTIFIC WORK OF INTEREST TO OIL MEN.

A knowledge of the conditions that govern the accumulation of petroleum in pools is of the greatest practical value to the oil men, and investigations to determine these conditions have been carried on for a number of years by the geologists of the United States Geological Survey in various oil producing districts. The results of some recent work of this kind in Pennsylvania, Ohio and West Virginia, by Messrs. W. T. Griswold and M. J. Munn, have just been published by the Survey as Bulletin No. 318.

The investigations of Mr. Griswold and Mr. Munn involved the solution of two important questions:—First, what are the physical laws under which oil accumulates in pools; and, second, how many of the conditions of this accumulation can be determined prior to actual test by the drill. The area selected for study was that portion of the Appalachian oil field comprising the Steubenville (Ohio-West Virginia) and the Burgettstown and Claysville (Pennsylvania) quadrangles, within which lie most of the white oil producing sands of the Appalachian field. This area, about 630 square miles in extent, has been tested by numerous wells, and includes large and important developed oil pools from the Berea, the Hundred-Foot, the Gordon, the Fourth and the Fifth sands. Records of the conditions discovered by the many test wells were collected, and a map of one of the principal oil producing sands in each quadrangle was drawn to represent the sand as if all of the material above it had been removed and its upper surface exposed to view. From the facts thus assembled general laws applicable to the different oil accumulations have been deduced.

The chief factors in the accumulation of oil are the geologic structure of the oil-bearing rocks and the salt water contained in the different producing sands. These sands vary greatly in the extent of their saturation with salt water. The younger sands, or those nearer the surface, comprise much larger areas that are completely saturated, and the saturation decreases downward with each succeeding sand. The Fifth, the deepest sand from which oil has been produced within the region, contains salt water only in very small areas in the very lowest spots.

The oil has accumulated in different places with reference to the high and low points of the rocks, the place of accumulation depending upon the quantity of salt water contained in the sand rocks. In those sandstones that are completely saturated, the oil is found on high places; where the oil sands contain water only up to a certain height around the side of a structural basin—as if it were a bowl half filled with water—the oil lies at the top of the water and extends around the basin in lines at the same elevation, following the strike of the structure; where there is little or no water in the sands the oil accumulates in the syncline or lowest part of the oil sand.

The possibility of accurately mapping an underground sand without the use of many well records was determined only for the area investigated, for the accuracy of the results of such work depends on the degree of parallelism that exists between the different geologic strata outcropping at the surface—that is, on the regularity or irregularity of the relations between the strata outcropping at the surface and the oil sands.

The bulletin just published explains the methods of work and includes detailed maps of the quadrangles investigated. Copies of it may be obtained free of charge by applying to the Director of the United States Geological Survey at Washington, and mentioning the PETROLEUM REVIEW.

THE PETROLEUM FIELDS OF INDIA.

The most recent issue of the records of the Geological Survey of India (Vol. XXXV., Part I.) contains a brief description of the various petroleum deposits in India. It appears that last year a systematic survey of the areas and of the industry generally was commenced by Mr. E. H. Pascoe, and though these several reports are for the most part confidential, many of the general conclusions are of interest.

With reference to the Yenangyaung field, careful comparison of the numerous boring records and the geological characters shew that the oil-bearing sands, instead of being continuous over the whole dome, are very limited sand-banks in which the oil is stored.

The great variation in thickness, horizontal extent, and level of each of them points to this, as also does the pronounced and abundant "current-bedding," so typical of the strata immediately above. Perhaps one of the most interesting and puzzling features of this area is the occurrence of the largest quantities of gas, *not* in the centre, where the anticlinal crest reaches a maximum elevation, but at a considerable distance further south; in fact, the field seems to terminate southwards as a gas field.

With regard to the drilled borings, several deeper oil sands have been discovered by the Burmah Oil Co., since Dr. Noetling published his memoir, and these have generally proved to be much richer than those above. About 175 holes have been sunk in various parts of this field.

With reference to the shallow hand-dug twinza wells, the last remaining sites available within the reserved areas of Twingon and Bè-mè await allotment, after which the native oil industry must soon begin to wane unless the Burmans succeed in finding some means of reaching a depth greater than 400 feet, which at present is, their limit.

One of the questions under consideration has been the minimum distance allowable between the twinzas' wells. From statistics with regard to the rate of decline of

Burmese wells and the mutual interference in yield, it is evident that the drainage area of a well tapping shallow sands—especially those between 300 and 400 feet below the surface—extends beyond a radius of 60 feet, which is the minimum distance allowed between any two wells. In a field like that of Yenangyaung, where the sands are so variable, inconstant, and unequal in porosity, this is necessarily only an approximate statement; but the average well would certainly suffer—in some

cases fatally—should the distance limit of 60 feet be diminished. Before the twinzas learnt the use of the diving dress and air pump, they could not enter the oil sands to any great depths, but with this curious addition to their ancient methods they are now able to deepen their wells, and so to extend their horizontal sphere of influence.

During 1906 the new miocene anticline discovered by Mr. Macrorie, Geologist to the Burmah Oil Co., was examined. This extends north-north-west to south-south-east in the neighbourhood of Seiktein, Myingyan district, and is succeeded eastwards by three other anticlines all trending in the same direction. The most westerly, which passes through the village of Kabat, was practically the only one inspected. The arch is an asymmetrical one and shews no evidence of fracture; structurally the country looks promising from an

oil prospector's point of view. There are two facts, however, which damp one's hopes; these are, firstly, the distance of the locality from what has so far appeared to be the boundary of the oil belt in Burmah, and, secondly, the proximity of an extinct volcano.

The next area examined was the northern part of the Gwegyo anticline, Myingyan district, around the village of Ayadaw. From a geological point of view this region is of great interest, and the numerous excellent sections in stream courses beautifully illustrate the effects of large faults upon structure and topography. The presence of so much faulting close to the anticlinal crest renders the prospects of successful boring very doubtful.



THE ROUMANIAN PETROLEUM INDUSTRY DURING THE FIRST HALF OF 1907.

DETAILS OF PRODUCTION.

We have now before us more detailed statistics of the production of crude oil at the Roumanian oil fields during the first half of the year. The total production for the half year amounted to 554,482 tons, as against 409,511 tons in the first half of 1906, which is an increase of 144,971 tons, or more than 37 per cent.

The production for the half year in the various fields was as under:—

	Six Months, 1907.				Six Months, 1906.			
	Tons.				Tons.			
Prahova District—								
Bustenari	239,936				239,152			
Campina-Poiana .. .	111,524				52,611			
Moreni	140,039				62,387			
Baicoi	20,896				22,805			
Tintea	6,951				5,676			
Pacureti-Matitza .. .	539				644			
Apostolache	700				1,164			
Podeni-Noi	200				194			
Bordeni-Parsani .. .	2,544				337			
Provita-de-Jos .. .	157				565			
Recea	442				773			
Oparita-Copaceni .. .	115				127			
Aricesti and Chiosdeanca .. .	9				9			
Poiana de Verbilau .. .	1				1			
Gornetu Cuib	9				17			
Calinet	3,858				909			
Faget-Doftanet .. .	1,418				2,606			
Popesti	112				—			
Total for Prahova				529,450	389,977			
Dambovitza District —								
Gura-Ocnitza	12,924				6,737			
Colibasi	1,853				1,571			
Resca	27				33			
Malu-Rosu	43				58			
Glodeni-Badislavoia .. .	1,449				1,408			
Total for Dambovitza				16,296	9,257			
Buzeu District—								
Sarata-Monteoru	4,587				5,832			
Berca	—				38			
Tega	—				10			
Policiori	19				41			
Total for Buzeu				4,606	5,921			
Bacau—								
Various Fields	4,130				4,356			
Grand Total				554,482	409,511			

The production of the principal producing firms during the first half of 1907, compared to the corresponding period of 1906, was as under:—

				Six Months, 1907. Tons.	Six Months, 1906. Tons.
Steaua Romana—					
Bustenari	..	..	..	72,637	57,461
Campina	..	..	..	101,943	38,595
Baicoi	..	..	..	5,077	21,742
Other Fields	..	..	..	8,559	10,518
Total	..	..	..	187,216	128,316
Regatul Roman Co.—					
Moreni	..	..	..	92,387	32,156
Campina	..	..	..	4,244	8,571
Baicoi	..	..	..	5,452	339
Total	..	..	..	102,083	41,066
Bustenari Co.	..	..	..	66,196	65,329
Romano-American Co.—					
Moreni	..	..	..	33,827	12,461
Bustenari	..	..	..	5,292	6,664
Other Fields	..	..	..	498	161
Total	..	..	..	39,617	19,286
Telega Oil Co.	..	..	..	24,262	31,863
International Co.—					
Bustenari	..	..	..	9,637	15,181
Gura Ocnitza	..	..	..	11,840	4,910
Total	..	..	..	21,477	20,091
Trajan Co.—					
Bustenari	..	..	..	7,119	7,560
Campina	..	..	..	3,426	4,570
Baicoi	..	..	..	9,949	—
				20,488	12,130
Colombia Co.	..	..	..	14,433	9,282
C. M. Pleyte and Co.	..	..	..	14,078	18,031
Aquila Franco-Romana			..	8,172	6,277
Arnheemsche Petroleum Co.			..	6,018	6,266
Nafta Co.	..	..	..	4,180	5,937
Secoleanu Bros.	..	..	..	4,593	4,811
H. F. Drader	..	..	..	4,035	6
Gallo-Romana Co.	..	..	..	2,604	2,959
K. Ozinga	..	..	..	2,544	337
Stefanescu and Co.	..	..	..	1,848	747
A. Van de Werk	..	..	..	1,348	2,077
Stanescu and Guiglescu			..	1,985	4,734
Grigorescu and Stroe	..	..	..	1,574	1,321
Riske, Popescu and Ionescu			..	1,264	1,659
Negulescu	..	..	..	1,393	474
P. A. Naumescu	..	..	..	1,124	1,258
S. Mihalik	..	..	..	1,484	485
Olandeza Romana Co.	..	..	..	1,393	4,408
Ion Grigorescu	..	..	..	1,600	1,310

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO AUGUST 26th, 1907.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Aug. 12.	From Jan. 1.	Since Aug. 12.	From Jan. 1.	Since Aug. 12.	From Jan. 1.	Since Aug. 12.	From Jan. 1.	Since Aug. 12.	From Jan. 1.	Since Aug. 12.	From Jan. 1.	Since Aug. 12.	From Jan. 1.	Since Aug. 12.	From Jan. 1.
Austria	—	—	2,100	69,540	—	67,770	—	—	—	—	—	—	—	—	2,100	137,310
Belgium	—	153,410	29,550	443,565	—	—	—	310	—	4,000	—	—	—	590	29,550	631,875
Canada	—	—	—	—	4,800	4,800	—	—	—	—	—	—	—	—	4,800	4,800
Dutch India	—	—	—	—	—	—	—	—	2,075,160	16,410,080	—	—	—	—	2,075,160	16,410,080
Germany	10,910	1,192,385	97,480	1,034,610	—	2,000	—	—	—	80	—	—	—	3,500	108,390	2,232,575
Holland	—	1,070	—	10,470	—	—	—	—	31,800	449,530	—	—	—	90,330	31,800	551,400
Roumania	—	5,744,090	—	—	—	—	—	5,159,590	—	1,459,000	—	238,700	—	—	—	12,601,380
Russia	313,590	23,262,560	8,910	2,254,700	—	—	—	887,040	1,740	11,730	—	—	1,417,110	—	324,240	27,833,140
U.S.A.	3,384,670	67,156,100	1,563,770	25,670,105	—	579,710	782,150	32,581,290	—	3,456,100	—	4,112,470	16,960	964,290	5,747,550	134,520,065
Other Countries	—	950	60	56,255	—	—	—	—	—	2,500	—	40	88,200	117,790	88,260	177,535
	3,709,170	97,510,565	1,701,870	29,539,245	4,800	654,280	782,150	38,628,230	2,108,700	21,793,020	—	4,351,210	105,160	2,593,610	8,411,850	195,070,160

GERMAN PETROLEUM IMPORTS IN JULY.

The imports of petroleum products into Germany during July were as under :—

	Tons.
Illuminating Oil	67,537
Lubricating Oil	18,250
Crude Benzine	7,187
Crude Oil	2,018
Refined Benzine	644
Residuals	83
Gas Oil	617
Turpentine Substitutes and Other Mixtures ..	93

Total 96,429

The total imports were distributed among the various producing countries as under :—

	Tons.
United States	64,545
Russia	12,394
Austria-Hungary	10,869
Dutch-India	5,353
Roumania	2,250
Other Countries, or origin not stated ..	1,018

Total 96,429

The exports of various petroleum products from Germany in July were : - Lubricating oils, 1,040 tons; illuminating oils, 47 tons; residuals, 100 tons; crude benzine, 10 tons; refined benzine, 225 tons; total, 1,422 tons.

THE BATOUM EXPORT TRADE IN JULY.

From the beginning of July a weak tone made itself manifest in the Batoum export operations, which affected the trade in all products. The pipe line also began to work irregularly, delivering kerosene with considerable delays, and this caused much inconvenience to firms who had not sufficiently large stocks on hand. The consequence was the borrowing of oil had to be resorted to. This state of affairs became more accentuated in the last week of the month. Either through want of kerosene on the spot, or for other reasons, the pipe line had not, at the time of writing, delivered to the consignees the balance of the 2 per cent. leakage allowance, which, under the present circumstances, might have afforded some relief to the trade.

Apparently the decrease in the volume of the export trade is responsible for a decline in arrivals of oils from Baku and in stocks at Batoum. The deliveries of kerosene from Baku in July were only between 460,000 and 480,000 poods per week. Some of the leading firms are for weeks interrupting deliveries from Baku, whilst others operate on a much reduced scale.

During the first 25 days of July the quantity of kerosene in bulk shipped from Batoum was 1,148,000 poods, of which one cargo of 374,000 poods was directed to Far Eastern ports. The leaders of the market—Messrs. Rothschilds and Nobel began from the beginning of June to ship some cargoes at long intervals to the Far Eastern markets, which have not been receiving any Russian oil for a long time.

In the case oil trade a reaction has also set in. Both the manufacture and shipments of cases have been reduced. The rise in the price of kerosene at Baku to 44-45 copecs has had its immediate effect on the tone of the Batoum market. Negotiations did not lead to any results, and the price of 2 to 2.05 roubles per case could not be acceded by the foreign buyers in Constantinople

and other markets, and the trade was restricted to chance shipment of small quantities. The Turkish and Balkan consumers, taking advantage of the lower prices at which Roumanian oil is offered them, the difference being from 20 to 30 copecs per case, buy the latter in preference to the Russian product. During the first 25 days of July there were shipped from Batoum to Turkish and Balkan ports 390,000 poods of case oil. Of special products, Nobel, after a long interval, shipped a cargo of 209,000 poods of solar oil out of stock. The trade in lubricating oils was quiet. The comparatively small shipments shew that there is no great lack of lubricating oils felt on the continental markets. The quantities shipped were :—Machine oil 175,000 poods, and other oils 62,000 poods.

GROSNY PRODUCTION DURING THE FIRST HALF OF 1907.

The total production of crude oil at the Grosny oil fields during the first half of 1907 amounted to 18,747,053 poods, against 20,008,397 poods produced in the first half of 1906. The cause of this decline becomes clear at once if we mention the fact that the Akhverdoff Co., the premier producing firm in Grosny, has in the first half of 1907, owing to the slackening of the yield from their three spouters, had a production of only 8,280,800 poods, as against 11,285,100 poods in the first half of 1906. The only firm who can shew a substantial increase in production is the Anglo-Russian Maximoff Co., Ltd., which has during the first six months of this year produced 3,504,400 poods, as against 2,291,900 poods for the first half of 1906.

The production of crude oil in June amounted to 2,833,625 poods, as against 3,819,213 poods in May. The decline occurred both in production by spouters and baling wells, namely :—

	June. Poods.	May. Poods.
Production by Spouters ..	161,000	982,000
„ Baling ..	2,672,625	2,837,213
Total ..	2,833,625	3,819,213

The production of the various firms in May and June was :—

	May. Poods.	June. Poods.
Akhverdoff Co. ..	1,973,400	1,086,900
Spies Petroleum Co., Ltd. ..	557,585	575,325
Anglo-Russian Maximoff Co., Ltd. ..	649,500	571,000
Kasbeck Syndicate, Ltd. ..	135,290	144,510
Tcheleken-Daghestan Co. ..	121,450	128,610
North Caucasian Oilfields, Ltd. ..	99,200	91,400
Russian Standard Co. ..	80,438	76,982
James MacGarvey ..	100,000	64,548
Moscow Co. ..	27,400	25,350
Caspian and Black Sea Society ..	26,600	24,450
Executors of Maximoff ..	27,050	21,800
St. Petersburg Co. ..	21,300	21,750
Kholodovsky ..	—	1,000

On the 1st of July (o.s.) the total number of boreholes in the Grosny oil fields was 270, of which 165 were producing, 35 were in course of drilling or deepening, 7 in trial baling, 12 under repair, 13 were derricks in construction, and 37 were abandoned ones. The amount of drilling done in June in 38 wells was 4,475 feet. The total number of wells are divided according to depth into the following groups :—

	Wells.		Wells.
Up to 700 feet ..	25	1,750 to 2,100 feet ..	14
700 „ 1,050 „ ..	48	2,100 „ 2,450 „ ..	3
1,050 „ 1,400 „ ..	62	2,450 „ 2,800 „ ..	1
1,400 „ 1,750 „ ..	47	Above 2,800 „ ..	1

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	5-3/4
Baku Russian Petroleum ..	£750,000 Ord.	£1	2/9-3/3
.. ..	£650,000 5 1/2% Pref	£1	5/6-6/0
Bibi-Eybat Petroleum Co. ..			5/0-6/0
Californian Oilfields ..	£250,000 Ord.	£1	5 3/4-6
Commonwealth Oil Co. Pref	16/- paid up (Prem.)		1 5/8-1 7/8 pm.
.. ..	Def. £1 fully paid		2-2 1/4
European Petroleum ..	£550,000 Pref.	£1	1/0-2/0
.. ..	£550,000 Ord.	£1	0/6-1/6
.. ..	£376,000 Deb.	£100	75-79
Russian Pet & Liquid Fuel ..	£500,000 6 1/2% Pref.	£1	5/0-6/0
.. ..	£600,000 Ord.	£1	3/6-4/6
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	1 1/8-1 3/8
.. ..	£575,000 Ord.	£1	2/9-3/9
Shell Transport & Trading ..	£2,000,000	£1	44/6-45/6
.. ..	£1,000,000 Pref.	£10	10-10 1/4
Spies Petroleum Company ..	£312,500	10s.	6/6-7/6

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Aug. 26th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	505	508
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,375	4,400
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	152	154
Neft Co.	250	—	—
Nobel Bros.	5,000	9,600	9,700
.. ..	250	—	—
Rops and Co. V.	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading			
Co.	250	—	—
.. .. (Second Issue)	250	—	—

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 4s. od.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 3s. 9d.
Burmah Oil, Ord.	£1,100,000	£1	£3 3s. 9d.
Do. Pref.	£250,000	£1	£1 4s. 6d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£6 16s. 6d.
Do. 5% Pref.	£18,900	£7	£4 13s.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 18s. 6d.
.. .. (17s. paid)			
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	£12 os. od.
.. .. (17s. paid)			
Do. 6% Cum. Pref. ..	£100,000	£10	£13 5s. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 8s. 6d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 14s. od.
Do. "B" Deb.	£150,000	£100	£172 xd.

DUTCH COMPANIES.

Company	Latest Quotations (per cent.)	Florins.
Arnhemsche Petroleum Mij.	50	1,000
Aurora (Deb. 5%)	—	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	120	50
.. .. (Deb. 4 1/2%)	100	1,000
Gaboës	—	—
Holl. Rumeensche Petroleum Mij. ..	29	1,000
Int. Rum. Pet. Mij.	96	500
Java Petroleum Mij. (Ord.)	—	1,000
.. .. (Pref.)	8 1/4	—
Koninklyke Nederl. Pet. Mij. Shares ..	263 1/4	250-1,000
.. .. Share certificates	261 1/2	1,000
Mœara Enim Petroleum Mij.	127	100
.. .. 1-1,000 Oblig. 5	100	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij. ..	12	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	—	—
.. .. (Deb. 5%)	—	—
Panolan Maatschappij Cert.	290	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	124	1,000
.. .. (Common)	—	—
Sumatra-Palembang Petroleum Mij ..	87 7/8	500
Tarakan Petrol Mij.	38	—
Zuid Perlak Petrol. Mij. (Pref.) ..	91 1/2	—

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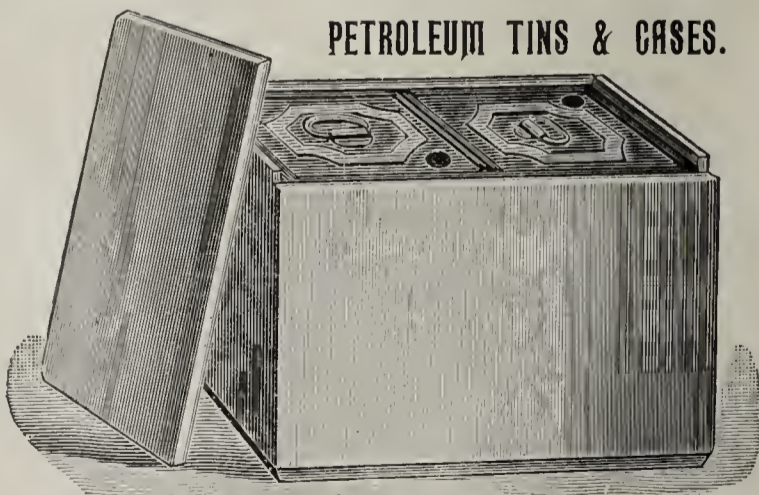
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A TREATISE ON PETROLEUM.

By SIR BOVERTON REDWOOD, D.Sc., F.R.S.

Hon. Mem. Am. Phil. Soc.; Hon. Mem. Imp. Russ. Tech. Soc.; Adviser on Petroleum to the Admiralty and Home Office; Consulting adviser to the Corporation of London under the Petroleum Acts; Adviser on Petroleum Transport to the Thames Conservancy

CONTENTS.—Section I.: Historical Account of the Industry.—Section II.: Geological and Geographical Distribution of Petroleum and Natural Gas.—Section III.: Chemical and Physical Properties.—Section IV.: Origin.—Section V.: The Production of Petroleum, Natural Gas and Ozokerite.—Section VI.: Refining.—Section VII.: The Shale Oil and Allied Industries.—Section VIII.: Transport, Storage and Distribution.—Section IX.: The Testing of Crude Petroleum, Petroleum and Shale Oil Products, Ozokerite and Asphalt.—Section X.: Uses of Petroleum and its Products.—Section XI.: Statutory, Municipal and other Regulations relating to the Testing, Storage and Transport.—Appendices.—Bibliography.—Index.

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SATURDAY, AUGUST 31ST, 1907.

THE THIRD INTERNATIONAL PETROLEUM CONGRESS.

THE Third International Petroleum Congress which is during the next fortnight to hold its sittings at Bucarest, Roumania, forms the one great event to which the eyes of all interested in the petroleum industry are directed. Seven years ago, the initial International gathering held at the Paris Exposition was still fresh in our minds, but there were few who looked forward with any certainty of hope that the day would come when the seeds then sown would bring forth in the course of a few years such gratifying results as are now to be seen in the Congress at Bucarest.

This is the first occasion upon which the Petroleum Congress has been held in a petroleum producing country; it is the first occasion that a Government has seen fit and proper to shew its great interest in the gathering by placing at the disposal of the Congress President a substantial sum of money in order that the gathering may achieve that importance its interests warrant; and it is also the first occasion when something like seven hundred gentlemen, one half of whom have travelled considerable distances, and many of these from the other hemisphere, are to assemble under

one roof to consider seriously the many questions which are inseparably associated with the now all-important branch of trade and commerce connected with the production, refining and distribution of petroleum and its many products.

It is not at all surprising when we consider the constant growth and expansion of the petroleum industry generally, that its members throughout the world, no matter how great the distances which divide them, seriously feel the necessity for an interchange of thought and ideas, and recognise the bond which draws them together to consider those various problems which have sprung up for solution since the petroleum industry commenced its march of progress. Simultaneously with progress and expansion, many questions—highly diversified yet all important—now demand urgent attention, and must of necessity force themselves upon the mind. This, of course, is naturally but the result of economic laws set going by the growth of demand, and also the competition of supply.

It is most assuredly a certain sign of a vigorous and growing condition, that so many leading men in the petroleum industry—some scientific, some industrial, and others commercial—who regard the industry from as many different points of view, agree to meet and ventilate their opinions upon some of the most important phases of the industry.

As the official organ of the Central Committee of Petroleum Congresses, the PETROLEUM REVIEW has always been foremost in recognising the claims of these International meetings, and knowing as we do the great amount of untiring energy which each and every member of the Roumanian Committee, as well as all other officials of the Congress, has thrown into the work, we do sincerely trust that the ends to be attained will justify that labour and valuable time which has so ungrudgingly been devoted to the coming Congress.

From every point of view, the Roumanian Congress will mark a distinct step forward. Prince Ferdinand has specially interested himself in the gathering, while the various Government departments have taken upon themselves a good share of the work involved, as well as giving to the Congress their undivided support. On every hand, the *esprit de corps* has been complete, and if we mistake not, the Third International Congress will achieve results which will be lastingly beneficial. The papers to be presented are very numerous, and upon subjects of importance to every member of the industry, while the discussions which will take place at the various sittings promise to be of great interest.

Even the pleasurable side of the Congress will not be without its education, more especially to the foreign delegates. A number of visits to the oil fields will unmistakably shew the great and rapid progress made of recent years in the Roumanian fields—a progress in point of view of actual petroleum production which scarcely finds any parallel in history, and many, we think, will be the lessons taught by a close inspection of the methods employed in this most progressive of petroleum producing countries.

The growing importance which attaches to the Congress is seen from the large number of foreign Governments who have sent special representatives to attend the deliberations, and personally we feel keen regret that the English Government has not felt it to be its duty to appoint a representative who should watch the proceedings in its own interests. The English interests in the welfare of the petroleum industry have of late been immeasurably increased by reason of the general adoption of oil fuel upon all the vessels constituting the English navy, and it is a pity that our Government should have been so short-sighted as not to recognise much in the Congress which would be of real value to it. It is consoling, however, to find that England is taking a most active interest in this Third International gathering, and the fact that a number of members of the English Committee (of which the President is Sir Fortescue Flannery) will attend, several of whom will present papers, speaks well for the interest aroused.

In a word, we wish "God-speed" to the Third International Petroleum Congress, for in its hands rests to a great extent the future welfare of the petroleum industry throughout the world.

THE NIGERIA INVESTMENT COMPANY.

In a circular letter to the shareholders, the secretary states: "Referring to the Exclusive Licence No. 7, granted under the Mining Regulation Ordinance, 1905, of the Colony of Lagos, to prospect for bitumen, coal, petroleum, and other minerals over an area of 225 square miles, which was acquired by this company, I have the pleasure to inform you that His Excellency the Governor of Southern Nigeria (Sir Walter Egerton, K.C.M.G.) has given his consent to the transfer of the same to the British Colonial Petroleum Corporation, Ltd., which has lately been registered for that purpose with a capital of £200,000. In accordance with the Mining Regulation (Oil) Ordinance, 1907, an ordinance which has recently been passed to regulate the raising, winning, and getting of mineral oils in the Colony of Southern Nigeria, and which takes the place of the Mining Regulation Ordinance, 1905, of the Colony of Lagos, the directors have applied to exchange the Prospecting License No. 7 for a license to drill for and work mineral oils under this ordinance, and this license will be granted to the British Colonial Petroleum Corporation, Ltd., as a matter of right under such ordinance.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 29th August, 1907, as follows:—

The market still continues quiet, with very little business passing, and prices are easier. We make prices of oil sizes to-day as under:—

1C	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	15/1 $\frac{1}{2}$ to 15/4 $\frac{1}{2}$	per box.
1C	19 $\frac{1}{4}$ × 14	120 "	110 "	15/1 $\frac{1}{2}$ "	15/4 $\frac{1}{2}$ "
1C	20 × 10	225 "	156 "	21/0 "	21/3 "

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The Roumanian Petroleum Exhibition.

As is now generally known, the first organised exhibition in connection with the petroleum industry is to take place during the month of September at Bucarest, and to the credit of those engaged in the Roumanian petroleum industry, and also the Petroleum Commission attached to the Roumanian Ministry of Domains, this initial effort is being held not only in a country whose progress in its oil industry is remarkable, but takes place at a time when delegates from almost every petroleum-producing country in the world will be visiting Roumania to take part in the third International Petroleum Congress.

In the light of the events of to-day, it may appear strange that the advantage of holding such a collective display of apparatus used in the production, refining and distribution of petroleum, strongly impressed itself upon Dr. Dvorkovitz some eight years ago—even before the first Congress was thought of—and yet it has only assumed what one might call practical shape after the lapse of so many years.

It was at the time when active preparations were being made in every branch of British and foreign commerce for an adequate representation at the Paris Exposition of 1900, that Dr. Dvorkovitz put forth an effort to have a thoroughly representative exhibit of all branches of the petroleum industry at Paris, and at that time the valuable co-operation of Mr. James Dredge, C.M.G., as hon. commissioner, together with the support of a number of gentlemen, both in England and on the Continent, was secured. A committee of organisation was formed, and matters for a time progressed, for a considerable amount of pioneer work had to be done before the scheme could assume concrete form. Then to the regret of all it was found that the necessary space for the making of a comprehensive display could not be secured in the Exposition grounds. It was the enthusiasm that had been brought to bear upon the subject, and the disappointment which was felt at the knowledge that a representative display could not be included in the exhibits at the Paris Exposition, that led to the calling together of the first International Petroleum Congress of 1900.

But since that time, matters have considerably progressed, and now that the third Congress takes place in a country whose Government is doing everything in its

power to assist in the development of its petroleum industry, it is not at all surprising to find that the Government has granted the use of the spacious Royal Pavilion in Carol I. Park (Fileret) for the holding of an exhibition in order to demonstrate the progress made by the industry.

In order to induce as many firms interested as possible to send exhibits, no charge has been made for space, and it is very gratifying to find that every section is well filled with displays of a most interesting nature.

In all, the Exhibition comprises eight sections or classes, but the two most important from a practical point of view—and also the two which have called for the largest number of exhibitors—are the second and third sections. The first of these is devoted to a display of the various systems of boring, and the apparatus used for the same; while the third section deals with the storage and transport of petroleum. The whole of the other sections all have their individual interest, and for the purpose of making a comprehensive inspection of the

various exhibits possible in a limited time, we give below the whole of the various classes and the exhibits which they include. They are as under:—Section 1: Geology and Origin of Petroleum; Section 2: Apparatus and Systems used in Drilling; Section 3: Storage and Transport of Petroleum; Section 4: Technology and Chemistry of Petroleum; Section 5: The Use of



THE ROYAL PAVILION.—The Home of the First Petroleum Exhibition.

Petroleum for Lighting Purposes, the Various Systems adopted in Lamps, Carburettors, and Apparatus for Gasification; Section 6: Motors—Petroleum, Benzine and other Motors; Section 7: Commercial Statistics; and Section 8: Miscellaneous Articles connected with the Petroleum Industry.

Not only will the Exhibition be open during the various days upon which the Congress is sitting, but for the convenience of the numerous interested strangers who will be in Bucarest during September, it has been decided to keep the exhibition open for the whole month. Space does not permit our giving here the list of the various exhibitors, but we may remark that it is very comprehensive, and apart from the Roumanian exhibitors, many well known German and Galician firms have come forward with exhibits which will amply repay inspection. So far as England is concerned, we regret to find that there are very few exhibitors—a fact which is all the more regrettable since the Roumanian Government, by relaxing the duty on petroleum machinery, has done all in its power to encourage trade in this respect with the United Kingdom. In our next issue we hope to deal with many of the more prominent exhibits.

NOTES FROM ALL QUARTERS.

RUSSIA.

More Strikes.—According to a telegraphic report from Baku the workmen employed at the oil fields and refinery of the Caspian Society came out on strike on the 23rd inst.

A Strange Decision.—The Russian Imperial Senate has recently pronounced a final decision in the case between the Neft Co. and Griase-Czaritzin railway. The company claimed from the railway a sum of 1,389,000 roubles under a contract for the hire of the company's tank waggons to the railway. The Senate decided for the railway and against the company.

Messrs. A. S. Melikoff and Co., petroleum producers at Baku, during 1906 had a total revenue of 345,273 roubles, and an expenditure of 266,294 roubles. Owing to the events of August, 1905, the loss incurred during the last two years stands at 643,983 roubles. The oil field, refinery, pipe line, etc., are valued at 1,931,227 roubles. The nominal capital is 2,000,000 roubles, and there are also creditors for 702,298 roubles.

The Tchimon Petroleum Co., operating in the Ferghana oil field, has published its first balance-sheet and accounts for 1905-6. These shew a gross revenue by sale of oil of 860,333 roubles, and a total expenditure on exploitation of 261,564 roubles, leaving a gross profit of 598,769 roubles. After allowing for interests, doubtful debts, abandoned boreholes, and damaged property and management expenses, there is left a net profit for distribution of 263,386 roubles.

Barge Fire.—Whilst residuals were recently being pumped over from one tank barge into another, in the roadstead outside Astrakhan, a fire broke out which extended to both barges, which contained together about 90,000 poods of mazout. The burning barges were promptly towed out to sea and sunk to obviate the danger to other tank vessels moored close by, but the oil in them continued to burn for over 24 hours. The damages are: barges 11,000 roubles, and the mazout 28,800 roubles.

The Russian Government as Oil Producers.—A Tiflis paper is responsible for the statement that in Russian Government circles the advisability is now discussed of the exploitation of oil fields in the Baku district by the Government for the purpose of supplying fuel oil to the State railways. The Government, which is the largest owner of petroliferous lands, is also the largest consumer in the form of fuel oil for the railway, and by producing oil for its own account it intends to make itself independent of the Baku oil market.

Batoum Shipments.—The following were the shipments of petroleum products from Batoum during the week ended August 4th, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1906.	1907.	1906.	1907.
To Europe ..	—	326,000	23,000	579,000
To the East ..	799,000	4,000	—	3,000
To Russian Ports.	—	—	9,000	—
From 1st Jan. to 4th Aug. :—				
To Europe ..	8,572,000	10,614,000	4,719,000	6,419,000
To the East ..	3,854,000	6,780,000	38,000	120,000
To Russian Ports	2,040,000	1,464,000	155,000	118,000

AMERICA.

The Californian Oil Fields, Ltd.—We learn that the Californian Oil Fields, Ltd., is actively drilling several wells, and shortly some of these are expected to be brought in. The company will thus increase its already good number of substantial producers.

The Pipe Lines to the Gulf.—The Gulf Pipe Line Co. has completed its line from Tulsa to Sour Lake, and has the south 80 miles tested. As soon as the three middle pumping stations are completed, the company expects to pump 12,000 barrels a day through, and it is understood will connect with a few outside leases that that capacity will handle. Pipe for the Texas Co.'s line south of Dallas is being strung, the line from Tulsa to Dallas being nearly completed, and as soon as the Armstrong station, 25 miles north of Red River, is finished, oil will be going through to Dallas, where five 37,000 barrel tanks are finished and three under way.

Another Sunset Refinery.—Another refinery is shortly to be erected in the Sunset field, this being for the purpose of manufacturing asphaltum from the heavy oils of the district. The site for the refinery has already been chosen; it is to be upon the Adeline Oil Co.'s property.

Another Canadian Oil District.—It is reported that oil has been discovered in the Kimberley Valley, a district nine miles from Markdale, Ont., and the Standard Oil Co. has already secured substantial holdings. A trial well will be sunk as soon as the necessary machinery arrives.

A New Californian Company.—One of the latest companies to enter the Santa Maria fields is to be known as the Ideal Oil Co., the concern having secured some leases at very reasonable prices near the property of the Palmer Oil Co. Drilling is to be pushed forward as rapidly as possible.

The Standard's New Refinery.—The Standard Oil Co. is now erecting an oil refinery at Alton, Illinois, which will cost approximately \$3,000,000. A number of options are being secured close to the refinery, for tradition has it that considerable quantities of natural gas were struck here many years ago.

Prospects in Nevada.—There is much excitement in Reno, Nevada, as the result of oil indications being found near the city. A concern composed of Sacramento people is already at work upon a well, and all the available land has been taken up. The indications of the presence of oil are said to be very strong.

In the Glenn District.—Operations in the Glenn district have been rather quiet for several weeks, and the pool's production is beginning to shew a decline. Several leases will have pumps installed by the close of the month. While shipments of ground stored oil for Texas fuel have begun and oil is being shipped for refining purposes, the railroads have as yet been unable to increase the number of cars they can handle, with very little prospect of any immediate increase, and surplus stocks are still a disturbing factor. The three pipe line companies during July handled about 60,000 barrels a day, and producers took care of about 15,000 barrels a day, the quantity of oil handled having been practically the same for three months.

ROUMANIA.

A Good Sign.—The borehole of the Steaua Romana at Policiori has recently been spouting.

Prospecting.—The Steaua Romana has commenced drilling some wells in the locality of Salcia-Sangerul.

The Petrolifera Co. has commenced, under the direction of Mr. E. Harting, to sink boreholes in the locality of Tataru-Calugareni.

Fire at Campina.—On August 20th a fire broke out on the property of the Steaua Romana at Campina, resulting in the destruction of the derrick of well No. 68 and of an oil tank close by.

Radium in Roumanian Petroleum.—Professor Hurmuzescu, after a series of investigations into the radio-activity of Campina petroleum, discovered that this oil possesses a very great radio-activity which denotes the presence of radium. It is estimated that one gramme of radium, worth 400,000 francs, could be extracted from 2,000 tons of oil.

The Encouragement of Industries.—Mr. A. Carp, the Roumanian Minister of Domains, is about to introduce into the Roumanian Parliament a bill to amend the law for encouragement of industries. The object is to improve the position of workmen in general, and to make compulsory the employment of a proportion of native Roumanians. Those failing to comply with these requirements will lose the advantages of the law of encouragement of industries.

Activity at Stejar.—Well No. 25 of the Romano-American Co. at Stejar, near Bustenari, continues to yield about 100 tons of crude oil daily. The seven boreholes which the Steaua Romana have in the same locality produce between 40 and 45 tons daily. The Bustenari Co., which has also four boreholes at Stejar, produces about 45 tons daily. Well No. 65 alone yields 30 tons daily. The Telega Co. has also one well at Stejar producing five tons daily, and the International Co. has two wells producing about five tons each daily. The depth of wells in this locality ranges between 185 and 250 metres.

THE STANDARD OIL COMPANY'S PROSECUTION.

THE FACTS OF THE CASE IN A NUTSHELL.

(Special to the "Petroleum Review.")

After reading the many garbled statements in certain sections of the daily press as to the facts which have led to the prosecution of the Standard Oil Co., and the remarkable verdict recently given against them, it is very refreshing to consider the real facts of the case as they presented themselves to the learned minds of Mr. John S. Miller, the eminent counsel who defended the Standard Oil Co. during its recent "persecution," and Mr. Alfred D. Eddy, the company's permanent counsel.

Both these gentlemen are now in London, and in order to prevent the slightest misconception, they have made a clear statement upon the subject which will be welcomed by readers of the REVIEW. This statement is as follows:—

"In America, during the last 10 or 15 years of the greatest industrial and commercial prosperity our country has ever known, there has grown up a prejudice against the accumulation of wealth. This is easily turned against the most successful commercial enterprises, and the Standard Oil Co., as one of the most successful, has been made the target of the most bitter attack.

"Among the powers granted to Congress by the Federal Constitution is the power to regulate commerce among the States of the Union and with foreign nations. After the lapse of a century since the Constitution was adopted an Act was first passed in Congress in 1887 regulating such inter-State transportation by railways. This Act, which has been amended and supplemented from time to time, is known as the 'Inter-State Commerce Act.' It provided for an Inter-State Commerce Commission, appointed by the President, with extensive powers to enforce the Act.' The Act also required railroad companies to file with the commission their tariffs of charges for transportation in inter-State commerce, and to make them public by posting them at their stations. The commission was given the power, subject to review by the Courts, of determining the justice or reasonableness of such charges.

"Prior to the passage of this Act in 1887 there extensively prevailed a practice among railways of granting to large shippers special net rates lower than those shown in their tariffs. The most usual method, perhaps was a repayment by the railway company to the shipper of secret so-called 'rebates,' or portions of the freight charges. Probably very few large or successful shippers failed to avail themselves of this practice. The main object of the Act of 1887 was to end this and every discrimination by railways in rates between shippers for transportation in inter-State commerce under similar conditions. We are authorised to state for our client, the Standard Oil Co., that at no time since the passage of the Act of 1887 has it asked for or accepted or knowingly received from any railway any such rebate or discriminatory or favoured rate of transportation. As will be seen, the case in which this enormous fine was imposed was not one of the receipt of any such discriminatory rate.

"It may be said that in the 20 years since the Inter-State Commerce Act was passed the transportation business has been fiercely competitive among the railways; this was inevitable under the legislation of Con-

gress itself. Another Act of Congress was passed in 1890, known as the Sherman Act, or the 'Anti-Trust Act' making criminal any contract or combination or conspiracy in restraint of inter-State trade or commerce. This Act was held by the Supreme Court of the United States to apply to railways and to forbid any agreement among competing railway companies looking to the fixing or making uniform of their freight rates; and so railway companies have been compelled strictly to observe the rule of competition in their charges. The severity of the competition thus imposed led to many evasions of the provisions of the Inter-State Commerce Act against discriminations in rates. This led to the passage by Congress in 1903 of a supplementary Act known as the 'Elkins Act,' which made it a misdemeanour for a railway company engaged in inter-State commerce wilfully to neglect to file and publish its tariffs as required by the Inter-State Commerce Act, or strictly to observe the tariffs so established. That Act also made it a misdemeanour for a railway company to offer, or give, or for a shipper to solicit, or receive, any rebate, concession, discrimination, or any device whatever by which property should be transported in inter-State commerce at a less rate than that named in the filed and published tariffs under penalty of a fine of not less than \$1,000, nor more than \$20,000. It was under this Elkins Act that the Standard Oil Co. was lately fined \$29,240,000.

"The purpose of these criminal provisions of the Elkins Act was obviously to prevent such favoured and discriminatory rates. It is our conviction that it is equally obvious that the Act did not intend to subject shippers to its criminal penalties for the failures of railway companies to comply with the Inter-State Commerce Act when the shipper was himself free from fault. As will be seen, the only defect or infirmity which the Court found, and for which the Standard Oil Co. is punished, was the failure of the Chicago and Alton Railway Co. to file under the Inter-State Commerce Act at Washington (which was nearly 1,000 miles from the point of shipment) the particular tariff sheet naming the rate in question. The Standard Oil Co. was ignorant of this fact, and made its shipments in good faith under the information explicitly given to it that the rate was duly filed.

"The Standard Co. about 1890 built a large oil refinery at Whiting, a suburb of Chicago. The corporate limits of the city of Chicago, in the State of Illinois, extend to the boundary line between that State and the State of Indiana; and Whiting and certain other Chicago suburbs which are manufacturing points are just over the State line in Indiana. It has long been the recognised practice of trunk railways centreing in Chicago and other large cities to give to suburban manufacturing points within certain 'switching' limits the same freight rates as the large city is given. So Whiting and other suburbs of Chicago, whether in Indiana or in Illinois were all given the Chicago rate by the Chicago and Alton and other railways.

"The transportation now in question was from Whiting to East St. Louis, which is in the State of

Illinois, on the Mississippi River. From the opening of the Standard Oil Co.'s refinery at Whiting until 1905, a period of 14 or 15 years, the established commodity freight rate from Chicago (and from Whiting) to East St. Louis, on petroleum and its products, in carload lots, was 6c. per 100 pounds. The company openly shipped thousands of cars at that rate, without any question of legality, until this indictment was returned in 1905. The rate was neither secret nor discriminatory, but was open to all shippers. The railway companies duly made public and furnished the Standard Oil Co. with a tariff sheet shewing this as the established rate from Chicago to East St. Louis. The Chicago and Alton Railway also made public and filed with the Inter-State Commission at Washington and furnished to the Standard Oil Co. a tariff sheet known as an 'application sheet,' or tariff, stating that all rates from Chicago to East St. Louis applied to shipments from the suburb of Whiting and other suburban points within the Chicago switching limits in Illinois and Indiana named upon such sheet.

"The evidence was that the Standard Co. was given this rate as a lawfully established and published rate, and was informed by the tariff clerk of the railway company, who gave the rate, that it was duly filed with the Inter-State Commerce Commission, and acted on the faith of this information in making the shipments in question. This evidence was uncontradicted. It happened, however, that the railway company had failed to file with the Commission at Washington the tariff sheet itself, which established and named this 6 cent rate from Chicago to East St. Louis, although it did file, as above stated, its tariff sheet stating that rates from Chicago to East St. Louis applied to shipments from Whiting. The apparent reason why the railway company failed to file the tariff sheet naming the rate from Chicago to East St. Louis was that transportation from Chicago to East St. Louis in the same State was not 'inter-State,' and therefore not subject to the Federal law. The Court held, however, as a matter of law, that the filing of the tariff applying the Chicago rate to Whiting was not a sufficient filing of that rate, such tariff sheet not shewing what the rate actually was. It also happened that there had been at one time established by an association of substantially all the competing railways carrying on transportation between Chicago (and between certain points in Wisconsin) and East St. Louis

a tariff naming rates upon classes of commodities which had been filed with the Commission at Washington, and the Court ruled that petroleum was included in a class for which 18 cents per 100 pounds was the rate from Chicago to East St. Louis. The evidence shewed that this tariff was not made public at stations as required by the Inter-State Commerce Act; and it was not known to the Standard Oil Co. According to the Act under which the indictment was returned, the criminal concession is defined as one by which transportation is at a rate less than that published and filed as required by the Act. The ruling of the Court, however, was that the prosecution need not shew that this 18 cent tariff was published at stations in the manner required by the Act, but that it was sufficient to shew that the rate was kept upon the tariff files in the freight offices of the railway company, and used in quoting rates. The ruling was, in effect, that 18 cents was the only lawful rate in this case; that the shipper was bound to have learned by inquiry that the 6 cent rate was rendered unlawful by the railway company's failure to file its tariff sheet shewing the same; and that in so shipping at the 6 cent rate, which was all this time a lawful rate for shippers from Chicago and other suburban points in Illinois, the Standard Co. was guilty of receiving an unlawful 'concession'; that although the shipments included varying numbers of cars, a separate penalty was incurred for each car; and that the maximum penalty of \$20,000 for each car should be imposed."

BAKU PRODUCTION IN JULY.

The total production of crude oil at the Baku oil fields in July amounted to 40,353,000 poods.

The production of the leading firms was as under:—

	Poods.
Nobel Bros.	5,400,000
Caspian and Black Sea Society	3,000,000
Caspian Society	2,300,000
Baku Naphtha Co.	2,200,000
Mirzoeff Bros.	1,400,000
Russian Naphtha Co.	1,300,000
Schibaieff Petroleum Co., Ltd.	1,200,000
Aramazd Co.	1,200,000
Ter Akopoff Co.	1,200,000
Naftalan Co.	1,000,000
Bibi-Eybat Petroleum Co., Ltd.	1,000,000
Zoubaloff	900,000
Moscow-Caucasian Co.	900,000
Pitoeff and Co.	900,000
Baku Russian Petroleum Co., Ltd.	900,000
Russian Petroleum and Liq. Fuel Co., Ltd.	800,000
Nagieff	800,000
European Petroleum Co., Ltd.	500,000
Shikhovo Co.	500,000

GULF REFINING CO.,

Refiners of Indian Territory and Texas Petroleum.

We make a Speciality of

SUPERIOR LUBRICATING OILS OF HIGH VISCOSITY AND LOW COLD TEST.

Prompt Shipments from New York, Philadelphia, Boston, New Orleans and Port Arthur, Texas.

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European Representative—**H. E. WATSON, 10, RUE THIMONNIER, PARIS, FRANCE.**

THE RUSSIAN PETROLEUM AND LIQUID FUEL COMPANY, LTD.

Agitation Overpowers the Board, Who Withdraw their Latest "Scheme."

On Tuesday afternoon a meeting of the holders of preference shares of the Russian Petroleum and Liquid Fuel Co., Ltd., was held at Winchester House, Old Broad Street, E.C., for the purpose of considering, and if thought fit passing, the following extraordinary resolution:—"That the directors be, and they are hereby, authorised to apply the investments of the reserve fund constituted in pursuance of Clause 115 of the company's articles of association in accordance with the scheme to be submitted to the meeting." The Hon. Evelyn Hubbard (chairman of the company) presided.

The CHAIRMAN, in opening the meeting, said he regretted having to call the meeting at a time when they ought to be away for their holidays, but the scheme which the board had to lay before them was one which did not admit of delay, and involving as it did a commercial transaction with a company which would naturally object to details being published, they did not feel themselves justified in setting the proposals out *in extenso* by circular, the more so as many points were still unsettled. He desired to express his sincere regret if the fact of their non-publication of the scheme conduced to misunderstanding, but by way of clearing the ground, he wished to say that the board had decided not to bring forward the resolution, of which the shareholders had had notice. The board would allow sufficient time for shareholders to inform themselves fully as to their legal position in regard to the preference reserve fund, and so they would defer any proposals to deal with it till some convenient date—probably in October next—when the question had to be definitely decided. The reserve fund formed part of the general assets of the company, and while the preference shareholders had it as security, so far as it went, for their repayment in case of a winding up in priority to the ordinary shareholders, it was included in the general lien which both the first and second debenture holders necessarily held on all the company's assets.

The idea that it belonged exclusively to the preference-holders was a wholly erroneous one. No reserve of any company could stand as against its creditors. The debenture issues were made primarily for the purposes of consolidating open credits and floating debts, and, so far, did not affect the amount of charge standing prior to the claims of the preference shareholders on the reserve fund. As the board were advised, the interest of the preference shareholders in the reserve fund was somewhat remote. It was however, a fund which, if liberated under due restrictions for specific purposes, might, in their judgment, be of the highest value in tiding the company over a time of stress, and thereby keeping alive the rights of the preference shareholders, which would be inevitably jeopardised should the company fail at any time to meet its obligations. They did not believe that, in asking the preference shareholders to consent to that, they were asking them to make anything but a nominal sacrifice, and one which it was to their real interests to make. The proposals which the board had decided to withdraw, briefly, provided for the temporary investment of a considerable part of the reserve fund in the debentures of another petroleum company, or alternately, an advance upon their security for a fixed term. The consideration was to be a contract on the other company's part to deliver to the Russian Petroleum and Liquid Fuel Co. over the next twelve or fourteen months a large supply of oil on specially favourable terms, enabling them to fulfil their running contracts, and improving the financial outlook by a very large sum. Unfortunately, as the offer could only be made for prompt reply, which, under present circumstances, could not be given, the company now risked losing the benefit they had hoped to secure; but the board would do their best to keep it alive, and to obtain some offer on similar lines, which might be submitted to their next meeting.

Before sitting down he desired to say that within the last fortnight there had been one distinct symptom of improvement in their production. Well No. 53, at the great depth of 334 sagues (2,338 feet), had struck a new productive source, and for the last twelve days had given them an output of 4,000 poods per day—a satisfactory rate, especially in view of the fact that they had two more wells already on the same stratum preparing for pumping.

Mr. A. LEVY LEVER, M.P., said he was sure they had all listened with great attention to the chairman, but with, perhaps, greater surprise and greater astonishment because that meeting had been called at a time of the year when it was known perfectly well that everyone was either out of town or anxious to get away; and it was called for a purpose involving very vital interests to the preference shareholders of the company. Personally, he was very

doubtful whether the meeting would have been abandoned, or the resolution not submitted, if it had not been for the little opposition which the directors knew perfectly well had been raised—and raised, he thought, with every possible justification. He would tell them why, because he was acting with several other gentlemen to safeguard the interests of the preference shareholders, and those gentlemen at that moment were all more or less away, and abroad. He, therefore, before taking any part whatever, and immediately he received the notice, communicated with the secretary, and asked him if he would be good enough to furnish particulars of the scheme to be submitted. He met with a blank refusal. Furthermore, he thought he would see if he could by any possible means get any information with regard to the scheme, and he therefore instructed his solicitor to negotiate with the company's solicitors, with a view to ascertaining what the resolution was which was to be submitted; but again he met with a refusal. He was not even allowed to know the various headings of the scheme before that meeting, which they had attended at great inconvenience, and were told that no resolution was to be submitted. He certainly said that if it had not been for that opposition, for which in a way he was partly responsible, the resolution would have been submitted, and no doubt it would have been carried. He wished at once to assure the meeting that he had never in the past taken any part in any agitation that had been going on against the company, though he had been a shareholder from the beginning. On only two occasions had he attended the meetings of the company, and then only for a few minutes, having, naturally, faith in the directors, and believing they would safeguard the interests not only of the preference shareholders, but of the other shareholders. But he had to say that his faith of late had been shaken. He had heard in the city very ugly rumours as to the financial position of the company, and he asked the secretary point-blank if there was any justification for the rumours, for he was given to understand that there was a certain clique in the city who were prepared to buy the company up. He said if the company was to be liquidated, he thought the preference and ordinary shareholders should have the first opportunity of buying, and he was prepared to do so if necessary. He thought the time had come when the shareholders should have fuller information as to the prospects and the standing of the company at the present moment. He wanted to see if they could restore the company, if not to the Elysian days of years ago—when they paid 30, 40 and 50 per cent.—at least to a dividend-paying condition, which he believed, from information supplied to him, could be done with due care and proper management. There were two questions for the shareholders to consider, and, of course, if they could not answer them satisfactorily, it would be better to leave the matter to the directors to do as they liked, and not to waste further time. The first point they had to consider was what was the reason for the downfall of the company, and the second was whether the company could be resuscitated and again made to pay dividends. The chairman, no doubt, in the very best of faith, had given plenty of reasons on various occasions for the failure of the company, and had repeatedly thrown out hopes of better times in the near future. That day he had again done so; but it was only a repetition of the past—of what had been said over and over again. Even in May, 1906, at a meeting, the chairman said: "The articles limit our borrowing power to one-half the amount of the share capital, say £550,000 in all, and, although the extension of £350,000 will give us considerably more than we require at present, it is well to reserve a margin against any future contingencies. Your directors have always in view the desirability of acquiring fresh oil fields when opportunities offer." And yet in fifteen or eighteen months they were called together and told that these future contingencies that never were to occur had occurred again, and the financial position of the company was at stake. They all admitted perfectly freely that the unrest in Russia must of necessity have a very adverse influence on their company; but they were not in any different position from any other company. The unrest, the political situation, the strike, and riots affected other companies in exactly the same way as they had theirs; but they found that other companies during the past year paid very handsome dividends. He had taken seven companies, and found that their dividends last year—producing about half the oil of Baku, and all having large capitals—amounted to no less a sum, on an average, than 26 per cent.; the highest was 35 per cent. and the lowest 18 per cent. Their company was only producing 2 per cent. of the oil of Baku,

yet they had incurred a very heavy loss, and was unable, he believed, to meet its engagements in a right and proper manner.

The question which shareholders had to ask themselves was: Could the company be restored to a dividend-paying concern? He was told on very good authority that the company could be so restored, and that the property was one of the biggest oil producing plots in the world. He had every reason to believe in the truth of that statement, and if such were the case it behoved them all to do what little they could to restore the company to its former position. If necessary, they should revert to the old system of managing the wells and of management generally, for while that old system and management prevailed they received good dividends, and then, perhaps, they could have prosperity restored to them. If this meeting were to be adjourned he thought they had every right to ask that it should be adjourned to a time which would be suitable to the preference shareholders of the company, and he would respectfully submit to the directors that they deferred it until the second week in October, and that no date should be fixed without arrangement with the preference shareholders, so that the next meeting might be held at a time suitable to most of them. At the same time he would suggest to the board that they should forward to all shareholders, within three or four days of the present time, a full and impartial report of the resolution that was to be submitted and a copy of the scheme. Shareholders would thus be able to thoroughly digest the proposals, and know what they were going to be called together to consider. He might be very dense, but he was not prepared to take in and digest all that was said by the chairman and consider and vote upon it off-hand. He had received letters from shareholders thanking him for the action he had taken, and asking him to represent them at that meeting; but they had nothing before them, and he did not consider himself capable of considering a scheme at a minute's notice, and giving an opinion upon it. He respectfully invited the directors to accept this suggestion, and to meet the preference shareholders in the matter. He and those he represented did not wish to act antagonistically, but to help the company, and, at the same time, safeguard their own interests, and he respectfully asked the directors to conform to what he believed to be the wishes of all present.

Mr. WHITTAKER and Mr. I. H. MACKAY, both spoke as to the preference shareholders reserve fund being, according to the general impression, solely for the interests of the preference shareholders, the latter gentleman mentioning that Mr. Lever undoubtedly represented the general opinion of the preference shareholders.

The CHAIRMAN, in reply, said he had listened with great attention to the various criticisms. He would give every weight to what had been said, and would be prepared to reply fully to all the points raised when they brought forward their proposals at the next meeting. He did not think they had ever been accused before of trying to keep anything back, and undoubtedly they would have published this scheme if it had been ready; but they did not like to put forward an incomplete scheme. If they had adopted a mistaken course, he could only say that he regretted it, in the interests of the company as much as those present. He, personally, was probably more largely interested in the preference shares than any other gentleman in the room. Mr. Lever had referred to a statement of the directors, to the effect that they wished to have a margin on the amounts they wanted to borrow. That statement alluded to the margin which they had kept up. There was still an unissued margin of £100,000 of second debentures, which was the margin they had in view; but, naturally, in the present position they were not able to issue them. He did not think it would be well at that meeting to discuss the merits of the various contracts which had been entered into. They were very extensive, very important, and very vital to the company. He hoped the shareholders who had asked for information did not think that the board wished to disguise the position. Every business man must know that it was impossible to disclose details of large and complicated agreements, which were necessarily of a confidential character. The agreements were made with big distributing firms in Russia, and he could only say that since they had entered into those contracts other Russian firms had desired to come in, and had not been able to obtain as good terms as this company had secured. Mr. Lever was mistaken in thinking that the company made large profits when they distributed the oil themselves. The large profits were made, undoubtedly, when they were simply producers; then, owing to the fact that practically they were in the hands of one buyer, the oil at Baku fell to about four copecks and the profits went to vanishing point. They then, after taking the best advice in their power as to what they could do to find a fresh source of income for the company, deliberately,

and unanimously determined to go in for the refining and distributing business. They had to raise a good deal of money to do that, and spent a good deal on refineries, etc. Their attempts at distributing on their own account were not successful. The business was of such a technical nature and the competition was so great that they were unable to make profits from distributing in competition with the great firms. They therefore adopted what they thought had been the usual commercial course—at any rate, it was the trend of modern commerce—and decided to become partners rather than competitors with their big rivals. He thought what they were really suffering from was the fact that they had undoubtedly incurred great expenses, which told very hardly upon them now, with their reduced production. That, he thought, was their misfortune; he did not think it was their fault. He did not wish, however, to raise any debatable points; he simply desired the shareholders to understand that the board had in their minds a clear and intelligible explanation of the present position. They were quite as sensible of it as the shareholders were, and had worked extremely hard this year to see if they could not find some arrangement which would be profitable to the company and stop the leak which was draining their resources. As there was no business before the meeting that day he wished to say that it was closed—it was not adjourned. The directors, however, would summon a fresh meeting at as convenient a time as possible for the shareholders generally. He thought the date mentioned by Mr. Lever would be a suitable one and he would undertake that ample notice would be given of any proposals which the directors intended to bring forward, and any information which could legitimately be given would be entirely at the disposal of any shareholder.

A SHAREHOLDER asked whether the directors were at the present time drawing full fees. He thought the chairman ought also to give them some explanation as to the contracts to which reference had been made, and which he had been told their then manager—Mr. Tweedy—strongly opposed.

The CHAIRMAN said he pointed out at the last meeting that the one contract which Mr. Tweedy opposed was the Consolidated contract, and that came to an end this year. As to fees, for the past two years the directors had only been drawing half fees.

Mr. LEVER asked if he was to understand that the board would not accede to his request. What he asked was that they would submit the scheme within the next few days. He took it that, having convened this meeting, they had a scheme prepared, and to adjourn it without mentioning what the scheme was he thought grossly unfair. As to the contract he had mentioned, there was no getting away from the fact that the directors were deliberately warned against entering into it, and it had been the downfall of the company. He asked the directors in all fairness to submit the scheme within the next few days. The shareholders had a right to demand the details of the scheme.

The CHAIRMAN: The scheme the board was to bring forward is now withdrawn. (Laughter, in which the chairman joined).

Mr. LEVER asked if it was withdrawn owing to the agitation against it, or what was the reason? He might possibly be in favour of it if he knew what it was. All he said was that he wished to know what the scheme was. He represented 100,000 preference shares, and he believed 75,000 had been lodged in time.

The CHAIRMAN said the board did not propose to put forward or carry the resolution unless they thought there would be a fairly unanimous acceptance. The directors had to give an immediate reply, and therefore they had to declare the scheme off.

Mr. LEVER asked what reason the directors had to imagine that the scheme would not be approved. If it were found right and proper, he was quite sure the preference shareholders would be glad to approve it.

The CHAIRMAN said he had explained the outline of the scheme, which he understood would meet with strong opposition, and the board would therefore endeavour to get a scheme which would be on somewhat similar lines, but which, of course, would have to be changed in detail, and they would submit it to the preference shareholders in ample time. He had explained that the scheme was for the temporary investment of a considerable part of the reserve fund in the debentures of another company, in return for beneficial contracts for the supply of a large amount of oil, and he would undertake that before the October meeting the preference shareholders should have ample notice of the scheme when it was perfected.

Mr. LEVER asked if the board would give his solicitor power of inspection. He hoped they would let it be known to the shareholders in good and sufficient time. The present meeting had been called when the directors very well knew that everybody more or less was away.

The CHAIRMAN said Mr. Lever's solicitor should have every facility to inspect the proposals the board would make so soon as they were prepared. He should say they would give a fortnight's notice of the meeting, and the scheme should be fairly laid before the preference shareholders.

Mr. LEVER thought they should have at least three weeks in which to consider the scheme. He suggested that the meeting should be held in the third week of October, and that the scheme should be in the hands of the shareholders in the first week of October. The directors had acted in a grossly unjust way in convening that meeting and then not coming to any definite understanding as to when their scheme would be submitted.

The CHAIRMAN said he had not the least objection to that course; he wanted to meet the shareholders in every possible way. It was impossible to publish every detail of a somewhat confidential commercial proposal; but the directors were willing to give the shareholders as much information as they legitimately could.

Mr. LEVER asked if the board, if they were not prepared to give the scheme in detail to the general public by issuing it to the shareholders, would be willing to give it in detail to a committee of preference shareholders, so that they might arrive at a right and proper judgment in their advice to the other shareholders as to accepting or rejecting the scheme.

The CHAIRMAN said the board would not have the smallest objection to such a committee, supposing it were composed of business men who were substantial holders of shares. They would, in fact, be very glad to have their assistance.

Mr. WHITTAKER thought the board might confer with Mr. Lever, who represented a large number of preference shareholders, before settling a scheme. If they took him into their confidence something might be arranged which would be agreeable to all parties.

The CHAIRMAN said the board would have the greatest pleasure in meeting Mr. Lever.

The CHAIRMAN said the board would endeavour to give three weeks' notice, and if there were any points in the scheme which, for commercial reasons, it was undesirable to publish, they would agree to give full details, confidentially, to a committee who could advise the general body of shareholders. The present scheme had to be considered off, as it was subject to a prompt reply. He could not say whether they would be able to proceed with the scheme again; but the board would endeavour to do so, as they considered it would be very beneficial.

Mr. LEVER asked of whom the committee was to consist.

The CHAIRMAN said the board would be pleased to see any substantial shareholders.

Mr. LEVER thought a committee of three would be sufficient, and, if it were desired, he would undertake to find three representative members who held not less than 1,000 shares.

The CHAIRMAN agreed in this suggestion, and the meeting closed, no votes of thanks being passed.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended August 17th, was 121,000 poods, or 1,951 tons (The company's workmen at Balakhany were on strike last week, but resumed work on Sunday, the 18th inst.); and for the week ended August 24th was 255,000 poods, or 4,111 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended August 18th was 215,000 poods, or 3,466 tons; and for the week ended August 25th was 199,000 poods, or 3,208 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 18th August was 133,540 poods, or 2,154 tons; and for the week ended 25th August, 131,305 poods, or 2,117 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 18th August was 107,241 poods, or 1,729 tons (one day on strike); and for the week ended 25th August was 138,206 poods, or 2,228 tons.

THE UTILISATION OF THE OIL WELL GASES AT BAKU.

DESCRIPTION OF THE NEW ENGINE.

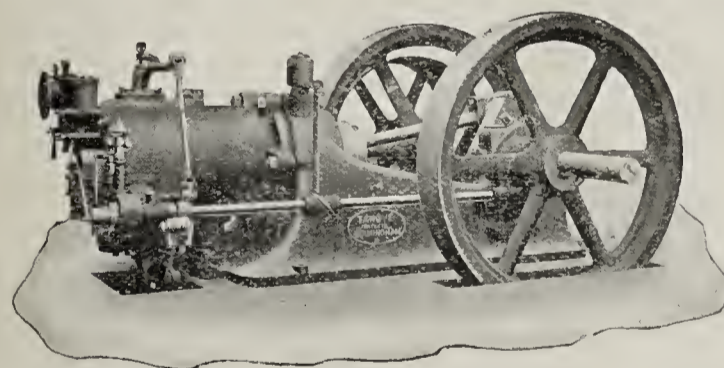
As announced in our last issue, we are now pleased to be in a position to give further details concerning the new engine made by Tangyes, Ltd., of Birmingham, for the Caspian and Black Sea Society, and which has been installed for the purpose of utilising the natural oil well gases as a means of power. As is known, this engine is the first in the whole district to do such work, and



THE ENGINE HOUSE AT RAMANY.

consequently its installation at Ramany is of considerable interest to all oil producers.

The engine, of which we give an illustration, is capable of giving 85 brake h.p. as a maximum test load, when running at a speed of 180 revolutions per minute, provided that the gas obtained is of a quality to that supplied for lighting towns, say of 5,000 calories per cubic metre. The bed or frame of the engine is of extra massive design and the two fly-wheels of special weight, so as to meet the sudden strains occurring when starting the operation of baling from the maximum depth. The ignition of the explosive charge of gas and air in the cylinder is by means of a specially simple form of



magneto-electric apparatus. The engine is equally well adapted to work with gas from the gas wells at Surachany, being actually connected to one of the pipe lines from that place in order to facilitate the experiments carried out under the supervision of the engineer to the company, Mr. Barski.

Messrs. Tangyes, Ltd., were also the pioneers, in conjunction with Mr. Ing. V. Amoretti, of Milan, with gas engines for the same purpose on the oil fields of Galicia, Italy and Roumania. In fact the application of gas engines to be driven with gas direct from the well was quite unknown until the advent of the "Amoretti" system connected to the "Tangye" engine on the oil fields in Galicia.

THE OIL SHALES OF SCOTLAND.

THE RELATIVE YIELDS OF THE VARIOUS SEAMS.

The following comparative statement of the oil and ammonia yields from the various seams in the Scotch shale fields will be of permanent interest. It is very

complete, embodying as it does the seams worked by the whole of the operating shale companies in Scotland:—

Name of Company.	Name of Shale.	Locality.	Worked at present.	Worked in the past.	Thickness.		Quality.	
					Maximum.	Minimum.	Gallons of Oil per ton of Shale.	Sulphate of Ammonia per ton Shale.
PUMPHERSTON OIL CO.	Fells Shale	Seafeld	Broxburn, Dunnet, and Bar-racks	{ Fells, Broxburn, Dunnet, Bar-racks, and Pumpherston Shales }	8 ft. each seam.	3 ft. each seam.	22 gallons each seam.	45 lbs. each seam.
	Broxburn Shale	Do. . . .						
	Dunnet „	Seafeld, Deans, & Pumpherston						
	Pumpherston Shale	Pumpherston						
	Fells Shale	Breich	None	Fells				
BROXBURN OIL CO.	Broxburn	Broxburn and Uphall	Broxburn	Broxburn	7 ft.	3 ft. 6 in.	30 gallons	42 lbs.
	Curly	Do. . . .	Curly	Curly	6 ft.	3 ft. 9 in.	22 „	35 „
	Grey	Do. . . .	Grey	Grey	8 ft.	4 ft.	20 „	37 „
	No. 1 Pumpherston or Jubilee	Roman Camp	No. 1	No. 1	9 ft.	7 ft.	18 „	58 „
	No. 2 Pumpherston or May-brick	Do. . . .	. . . .	. . . .	5 ft. 6 in.	4 ft.	...	...
	No. 3 Pumpherston or Curly	Do. . . .	No. 3	No. 3	6 ft. 6 in.	5 ft.	18-20 „	60 „
	No. 4 „ or Plain	Do. . . .	No. 4	No. 4	8 ft.	6 ft.	18-20 „	60 „
	No. 5 „ or Wee	Do. . . .	No. 5	No. 5	4 ft. 6 in.	3 ft.	18-20 „	58 „
PHILPSTON (JAMES ROSS & CO.)	Broxburn Upper	Philpston	Broxburn Upper	Broxburn Upper	6 ft.	5 ft.	18-20 „	40 „
	Broxburn	Do. . . .	Broxburn	Broxburn	5 ft.	7 ft.	15-30 „	40 „
Late LINLITHGOW OIL CO.	Broxburn	Champfleurio . . . .	. . . .	Do. . . .	12 ft.	...	20 „	40 „
	Wee Dunnet	Do. . . .	. . . .	Do. . . .	10 ft.	6 ft.	15 „	40 „
DALMENY OIL CO.	Broxburn	Dalmeny	Broxburn Shale	Broxburn	6 ft.	5 ft.	Good.	
	Curly	Do. . . .	Curly „	Curly	6 ft. 6 in.	5 ft. 6 in.	Fair.	
	Six-feet	Do. . . .	Six-feet „	Six-feet	6 ft. 6 in.	6 ft.	Fair.	
CLIPPENS OIL CO.	Fells	Loanhead . . . .	. . . .	1886 to 1888	2 ft.	1 ft. 10 in.	40 gallons	20 lbs.
	Broxburn	Do. . . .	. . . .	1886 to 1893	4 ft.	4 ft.	22 „	20 „
	Dunnet	Do. . . .	. . . .	1870 to 1893	7 ft.	6 ft.	28 „	22 „
OAKBANK OIL CO.	Broxburn Shale Group	Oakbank	Wee Shale	Nearly exhausted	1 ft. 6 in.	...	Good quality.	
	Do. . . .	Do. . . .	Big „	Do. . . .	4 ft. 6 in.	...	Do.	
	Do. . . .	Do. . . .	Lower Big Shale	Do. . . .	6 ft.	...	Do.	
	Do. . . .	Do. . . .	Curly Shale	Do. . . .	6 ft.	...	Extra good.	
	Do. . . .	Do. . . .	Broxburn Shale	Do. . . .	4 ft.	...	Do.	
	Dunnet	Do. . . .	Dunnet Shale . . . .	. . . .	6 ft.	...	Good.	
TARBRAX	Upper Raeburn Shale	Tarbrax . . . .	. . . .	Upper Raeburn Shale	4 ft. 6 in.	...	27 gallons	
	Lower „ „	Do. . . .	. . . .	Lower Raeburn Shale	2 ft. 10 in.	1 ft. 11 in.	Rich shale; high yield of oil	
	Fells Shale	Do. . . .	Fells Shale	Fells Shale	4 ft. 1 in.	3 ft.	28 gallons	
YOUNG'S OIL CO. . . .	Raeburn Shale	West Calder . . . .	. . . .	Raeburn Shale	4 ft. 8 in.	...	No returns given.	
	Munglé „	Do. . . .	. . . .	Munglé „	2 ft.	1 ft. 10 in.	Do.	
	Fells „	Do. . . .	Fells Shale	Fells „	7 ft.	2 ft. 6 in.	Do.	
	Broxburn „	Do. . . .	Broxburn Shale	Broxburn „	6 ft. 1 in.	3 ft. 6 in.	Do.	
	Dunnet „	Do. . . .	Dunnet „	Dunnet „	9 ft.	..	Do.	
		Uphall	Broxburn „ . . . .	. . . .	...	...	Do.	

The American Oil Market.

New York, Week ended August 17th.

Operations in the lower south-west fields during the week under review have brought in little of noteworthy mention, and reports of light producers have been general. Considerable interest centres in the Congo pool in Hancock county, West Virginia, and results of test work lately started with a view of advancing the producing lines are keenly awaited. The average of the pool has shewn slight diminution, as late completions have not been of sufficient productivity to compensate for the decline in the earlier producers. Second test and deep sand operations in Monongalia county in the same State have furnished some encouraging returns. New operations in Pennsylvania have furnished little out of the ordinary. The gusher that was encountered a few weeks ago in Bristoria district, Greene county, has shewn remarkable staying powers, late reports indicating an average of about 300 barrels a day. In the Lima fields of Ohio, the large percentage of completions falls in the duster classification, and there is little to encourage prospects of developing new pools, although efforts to this end are being pushed in Harrison county. The difficulty of caring for the heavy production in Illinois, says the *Oil, Paint and Drug Reporter*, continues to act as a check on operations, especially in Clarke and Cumberland counties. The runs from the wells in Illinois during the first ten days of the current month were reported to have approximated an average of 90,000 barrels a day, establishing a record for the field. July shipments were unusually heavy, amounting to 315,476 barrels, while the stock at the close of the month reached a total of 5,728,496 barrels. There is an active movement in the Mid-Continent fields, but nothing of an unusual character has been reported. A gusher recently encountered at Jennings, Louisiana, with an initial production of 2,500 barrels, is reported to have developed increased powers, shewing a natural flow of 3,500 barrels, as it is several hundred feet out of the proven tract; expectations are keen that a new field may be located. Arrangements have been started with a view of developing untried territory in Hardin county, Texas.

REFINED AND PRODUCTS.—Continued activity has characterised the local market for refined, both for home and foreign requirements. Engagements reported for export were one of 135,000 cases for September-October shipment to Japan, and one of 155,000 cases for November-December shipment to Japan. Clearances for the week aggregated 9,510,380 gallons from New York and 8,050,965 gallons from Philadelphia, against 10,587,650 and 8,199,894 gallons, respectively, during the previous week. Values have ruled with the same degree of firmness, but no changes are to be noted. Our correspondent advises us of a weaker market for forward delivery at Baku, with field conditions continuing calm and satisfactory. The London and Liverpool markets are well maintained for American and Russian lamp oils. Prices in the Indian markets, as well as in Shanghai and Yokohama, shew no quotable change. Cable advices on Friday indicated a slightly firmer market for American oil at 6½d., against 6¼d., as previously. Antwerp and Bremen were unchanged at 21½ francs and 6.35 marks, respectively. Freight rates have undergone no late change.

The products have been in steady request, and exports of naphtha aggregating 154,200 gallons have been recorded. A decline of 1c. has been announced in auto naphtha, establishing it at 16c. Stove gasoline is also lower at 16c.

CLOSING QUOTATIONS

	CRUDE.	Week ended	
		Aug. 10. 1907.	Aug. 17. 1907.
Pennsylvania crude in bbls.	\$8.20	\$8.20
Pennsylvania crude in bulk	4.75	4.75
Residuum, bbls. for export	6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Aug. 17. 1906.	Aug. 17. 1907.
Tiona .. ..	.. ..	1.74	1.78
Pennsylvania .. ..	.. ..	1.64	1.78
North Lima .. ..	.. ..	0.98	0.94
South Lima .. ..	.. ..	0.93	0.89
Indiana .. ..	.. ..	0.93	0.89
CANADIAN OIL:			
Petrolia .. ..	.. ..	1.37	1.34

REFINED—FOR EXPORT.

		Week ended	
		Aug. 17.	
Barrels, cargo	per gal.	\$8.45	@ 10.45
Philadelphia .. ..	.. ..	8.40	@ 10.40
Bulk, New York .. ..	.. ..	5.00	@ 7.00
Bulk, Philadelphia .. ..	.. ..	4.95	@ 6.95
Cases, New York .. ..	.. ..	10.90	@ 13.90
Cases, Philadelphia .. ..	.. ..	10.85	@ 13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Aug. 10. 1907.	Aug. 17. 1907.
3,000 to 10,000 .. ..	.. ..	10.80	10.80
1,000 to 3,000 .. ..	.. ..	10.85	10.85

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Aug. 10.	Aug. 17.
120 fire test, S.W.	in barrels	12	12
130 fire test, S.W. .. ..	.. ..	12½	12½
150 fire test, W.W. .. ..	.. ..	13½	13½
In bulk from tanks .. ..	.. ..	10	10
300 fire test .. ..	.. ..	13½@14	13½@14

NAPHTHA AND GASOLINE.

		Week ended	
		Aug. 10.	Aug. 17.
Naphtha, crude, car. lots, 68 @ 72 deg.	.. ..	17.00	16.00
Gasolene, 86 deg... ..	.. ..	24.00	24.00

PENNSYLVANIAN OIL RUNS from Aug 7th to Aug. 12th were:—Aug 7th, 250,295; Aug. 8th, 94,806; Aug. 9th and 10th, 298,818; Aug. 11th, 52,332; Aug. 12th, 104,754. For the month of July, 2,967,678.

THE DELIVERIES OF PENNSYLVANIA OIL from Aug. 7th to Aug. 13th were:—Aug. 7th, 154,687; Aug. 8th, 187,805; Aug. 9th, 176,299; Aug. 10th and 11th, 361,440; Aug. 12th, 191,356; and Aug. 13th, 208,224. For the month of July, 5,281,645.

CLEARANCES FOR THE WEEK.

During the week ended Aug. 16th, and since Jan. 1 the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.	Year.	1906.
Refined	9,510,380	290,564,810	289,825,639	
Crude	52,000	1,432,925	232,900	
Naphtha	154,200	6,182,850	13,112,069	
Residuum	—	416,827	3,613,000	

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

		Gallons.
From New York, week ended Aug. 16th ..	..	12,732,507
Total from New York, from Jan. 1st, 1907 ..	..	438,938,334
Same period last year .. ..	..	387,350,420
Increase .. ..	..	51,587,914
From United States, week ended Aug. 16th ..	..	25,389,355
Total from United States, since Jan. 1st, 1907	780,213,549
Same period last year	754,148,803
Increase	26,064,746

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The "Review" Shipping List.

AUGUST 30, 1907.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Selzaete	Smyrna	P. Shoreham, Aug. 24	GEORGIAN PRINCE	Rouen	Tyne	Arr. Aug. 25
ALICE ISABELLE..	Sables d'Olonne	Philadelphia	L. Aug. 17	GOLDMOUTH	Bremerhaven	—	At Singapore, Aug. 15
ALEMBIC	New York ..	Sydney (C.B.)	L. Aug. 8	GUTHEIL	Philadelphia	Stettin	Arr. Aug. 25
AMERICAN	New York ..	Antwerp	Arr. Aug. 27	HAINAUT	Antwerp	Piræus	P. Zeebrugge, Aug. 15
APPALACHEE	San Francisco	Calcutta	Arr. Aug. 23	HARRY WADSWORTH	Rouen	Middlesbro'	Arr. Aug. 20
APSCHERON	Antwerp	Batoum	P. Bechy Head, Aug. 28	HELOIS	Philadelphia	Nordenhamn	L. Aug. 22
ARAL	Tyne	Philadelphia	Arr. Aug. 22	HERMIONE	Rouen	Tyne	Arr. Aug. 25
ARAS	Newport	Philadelphia	Arr. Aug. 20	HOTHAM NEWTON	Swansea	Philadelphia	P. Mumbles, Aug. 15
ARGYLL	—	—	Coasting U.S. (Pacific)	HOUSATONIC	Philadelphia	Savona	P. Reedy Island, Aug. 9
ASHTABULA	San Francisco	Hankow	L. July 22	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
ASTRAKHAN	Hamburg ..	Philadelphia	L. Aug. 27	JOANNIS COUTZIS	Batoum	Dunkirk	L. Aug. 23
ATLAS	—	—	Coasting U.S. (Pacific)	J.B.AUG.KESSLER	Batoum	Bombay	Arr. Aug. 8
AUGUSTA	Havana	New York ..	Arr. Aug. 18	JAMES BRAND	London	Philadelphia	P. Prawle Pt., Aug. 17
AUGUST KORFF..	Philadelphia	Liverpool ..	P. Del. Break., Aug. 17	JULES HENRI	Barcelona ..	Marseilles ..	Arr. Aug. 16
AUREOLE	Lisbon	Philadelphia	L. Dartmouth, Aug. 19	KURA	Port Talbot	Constant'ple	P. Gibraltar, Aug. 18-19
AZOV	—	—	Trading on W.C. of South Amca.	LA CAMPINE	Philadelphia	Antwerp	L. Aug. 19
BAKU STANDARD	Tyne	Ibrail	P. Gibraltar, Aug. 26-27	LA FLANDRE	New York ..	Antwerp	L. Aug. 19
BALAKANI	Antwerp	Cardiff	Arr. Aug. 27	LA HESBAYE	Antwerp	Kustendje ..	P. Gibraltar, Aug. 19-20
BATOUM	Kobe	Palembang..	L. July 11	LA MADELEINE ..	Algiers	Brest	Arr. Aug. 16
BAYONNE	Venice	New York ..	Arr. Aug. 23	LA VIGUESA	Vigo	Philadelphia	L. July 19
BEACON LIGHT ..	Philadelphia	Rotterdam ..	L. Aug. 21	LACKAWANNA....	Barrow	Philadelphia	P. Torr Island, Aug. 18
BEME	Calcutta	Rangoon....	L. Aug. 4	LANSING	—	—	At San Francisco, July 2
BLOOMFIELD	Rotterdam ..	Tyne	Arr. Aug. 9	LE COQ	Bilbao	Kustendje ..	P. Gibraltar, Aug. 25
BORJOM	Alexandria ..	Constant'ple	L. July 29	LOUTSCH	Messina	Batoum	Arr. Aug. 8
BRILLIANT	Philadelphia	Copenhagen	L. Aug. 24	LUCERNA	Tyne	Phi'adelphia	P. Butt of Lewis, Aug. 18
BROADMAYNE	Cette	Philadelphia	Arr. Aug. 25	LUCILINE	Philadelphia	Blaye	At Pt. de Grave, Aug. 22
BULLMOUTH	Hankow	Shanghai ..	Arr. May 25	LUMEN	Philadelphia	Calais	Arr. Aug. 26
BULYSES	Bombay	Kurrachee ..	Arr. Aug. 6	LUX	Kustendje ..	—	At Malta, Aug. 23-24
BURGERMEISTER	Danzig	New York ..	Arr. Aug. 27	MANHATTAN	Philadelphia	Messina	L. Aug. 12
PETERSEN	—	—	—	MANNHEIM	Stettin	New York ..	P. Dunnet Head, Aug. 28
CALCUTTA	San Francisco	Shanghai ..	Arr. Aug. 12	MARGARETHA ..	Rio Janiero	Rio Grande	Off Rio Grande Bar, Aug. 6
CAPTAIN A. F. LUCAS	Sabine Pass	New York ..	Off Key West, Aug. 3	MAVERICK	San Francisco	Seattle	L. Aug. 12
CARDIUM	Hamburg ..	—	P. Malta, Aug. 29	METEOR	Singapore ..	Port Natal ..	Arr. Aug. 16
CATANIA	Honolulu ..	—	L. July 31	MEXICAN PRINCE	Tyne	Constant'ple	Off the Wight, Aug. 11
CAUCASIAN	Cardiff	Batoum	L. Constant'ple, Aug. 22	MIRA	Port Talbot	Philadelphia	P. Fastnet, Aug. 28
CHARLOIS	Philadelphia	Amsterdam..	P. Del. Break., Aug. 15	MUREX	Shanghai ..	—	L. July 1
CHESAPEAKE	Tyne	Philadelphia	Arr. Aug. 22	NARRAGANSETT..	London	Tyne	Arr. Aug. 4
CHESTER	Antwerp	Philadelphia	Arr. Aug. 25	NERITE	—	—	Tr. in China Seas
CIRCASIAN PRINCE	Buenos Ayres	Callao	L. Monte Video, May 5	NEW YORK	Southampton	New York ..	175 S.W. Fastnet, Aug. 25
CLAM	Freshwater..	—	At Suez, Aug. 5-6	OCEAN	Batoum	Rotterdam ..	Arr. Aug. 23
COL. E. L. DRAKE	Seattle	San Francisco	Arr. Aug. 12	OILFIELD	Philadelphia	Rouen	L. Aug. 19
COWRIE	Trieste	Kustendje ..	Arr. Aug. 18	ORANJE PRINCE..	Banes	—	L. Aug. 14
CUYAHOGA	Manchester	New York ..	Arr. Aug. 21	ORIFLAMME	Novorossisk	—	At Malta, Aug. 27
CYMBELINE	Manchester	Batoum	P. Constant'ple, Aug. 28	OSCEOLA	Norfolk (Va.)	Bluefields ..	L. Inagua, Aug. 4
CZAR NICOLAI II.	Batoum	Hamburg ..	Arr. Aug. 27	OTTAWA	London	Tyne	Arr. Aug. 4
DAGHESTAN	Genoa	Batoum	L. Aug. 28	OURAL	Batoum	Hamburg ..	P. Sagres, Aug. 24
DAKOTAH	San Francisco	Hong Kong	Arr. July 31	PALEMBANG	Balekappan	Colombo....	L. July 25
DELAWARE	New York ..	Avonmouth..	P. St. Ann's Hd., Aug. 28	PAULA	Philadelphia	Oxelosund ..	P. Del. Break., Aug. 18
DEUTSCHLAND ..	Hamburg ..	New York ..	Arr. Aug. 27	PECTAN	London and Emden	Galveston ..	Arr. Aug. 12
DIAMANT	Tyne	Philadelphia	P. Dunnet Head, Aug. 25	PENNOIL	Amsterdam..	Tyne and Philadelphia	In Tyne, Aug. 28
EDWARD DAWSON	Swansea	Batoum	L. Constant'ple, Aug. 16	PERLAK	Singapore ..	Soesoe	L. July 28
ELAX	Singapore ..	Europe	L. Aug. 3	PHOEBUS	Hamburg and Tyne	New York ..	P. Nantucket, Aug. 28
ELSIE MARIE	Philadelphia	Malmo	L. Aug. 23	PINNA	Antwerp	San Francisco	Arr. Aug. 20
ENERGIE	Tyne	Philadelphia	P. Dunnet Head, Aug. 17	POTOMAC	New York & Avonmouth	Belfast	P. Barry Island, Aug. 22
ERIVAN	Batoum	Liverpool ..	L. Aug. 24				
ETELKA	Batoum	Antwerp....	Arr. Aug. 27				
EUPLECTELA	Philadelphia	Hamburg ..	Arr. Aug. 18				
EXCELSIOR	New York ..	Rotterdam ..	Arr. Aug. 26				
EZIO	—	—	Coasting Peru				
FRANCE MARIE ..	Philadelphia	Marseilles ..	P. Del. Break, July 31				
GEESTEMUNDE ..	New York ..	Oscarshamn	At Carlshamn, Aug. 25				
GENESSE	Sabine Pass	U.K.	L. Aug. 13				

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PROMETHEUS....	Rotterdam..	New York ..	P. Lizard, Aug. 20	STROMBUS	Samboe	Barrow	Arr. Aug. 26
PRUDENTIA	Batoum	—	P. Galle, Aug. 5	SURAM.....	Tyne	Port Arthur (Texas)	Arr. Aug. 22
QUEVILLY.....	Rouen and Havre	Philadelphia	L. Havre, Aug. 4	SUWANEE	Hull	Sabine Pass	Arr. Aug. 13
RION.....	Port Talbot	Philadelphia	Arr. Aug. 28	SVIET	Plymouth ..	Batoum	L. Algiers, Aug. 20
ROCK LIGHT	Cardiff	Port Arthur (Texas)	P. Sand Key, Aug. 25	TELENA	London	—	P. Perim, Aug. 22
ROMANY.....	London	Aroë Bay ..	Arr. Aug. 26	TEREK.....	Batoum	Hamburg ..	Off Ushant, Aug. 27
ROSSIJA	Leith	Archangel ..	L. Aug. 11	TIFLIS	Hamburg & Tyne	Batoum	P. Sagres, Aug. 19
ROTTERDAM	Santos.....	Port Natal & Calcutta	L. Aug. 15	TIOGA	Gulf Port ..	Liverpool ..	Arr. Aug. 14
RUSSIAN PRINCE	Vera Cruz ..	Philadelphia	L. Aug. 14	TONAWANDA	Shanghai ..	Muroran	Arr. Aug. 16
SALAHADJI	—	—	Tr. Sts. Settlements and Java Seas	TROCAS	Soesoe.....	Adelaide	Arr. Aug. 27
SAN CRISTOBAL..	Tyne	—	P. Dungeness, July 22	TURBO.....	London and Amsterdam	Kustendje ..	L. Constant'ple, Aug. 23
SAN IGNACIO DE LOYOLA	Pasages	Philadelphia	L. July 9	TUSCARORA	Barry	New York ..	Arr. Aug. 28
SAXOLEINE	Rouen.....	Philadelphia	Arr. Aug. 28	TWINGONE	Madras	Rangoon ..	L. Aug. 6
SEMINOLE.....	San Francisco	Calcutta	Arr. Aug. 14	VEDRA.....	Yokohama ..	Palembang..	L. July 29
SINGU	—	—	Tr. in East Indies	VILLE DE DIEPPE	Havre	Passage West	Arr. July 29 (For repairs.)
SNOWFLAKE.....	Philadelphia	Birkenhead	L. Aug. 25	VOLUTE	Hankow	—	L. July 7
SPONDILUS	Pulo Samboe	—	P. Sagres, Aug. 26	WASHINGTON	New York ..	Venice.....	L. Aug. 24
STANDARD	Tyne	Philadelphia	L. Aug. 28	WEEHAWKEN	Tyne	New York ..	P. Dunnet Head, Aug. 27
				WILLKOMMEN....	New York ..	Danzig	L. Aug. 18
				WINNEBAGO	San Francisco	Yokohama ..	Arr. prev Aug. 29

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

August 30th, 1907.

Since our last report Refined Petroleum remains unchanged, being :—Russian, Spot 6d.; American, Spot 6½d.-6¾d.; Water White, 7½d.-7¾d.; Roumanian, 6¼d.

LUBRICATING OILS.

There has been no alteration in the prices, quotations being :—

American pale, £7 7s. 6d. to £11.

American dark cylinder, from £8 10s.

American filtered cylinder, from £11 2s. 6d.

Shellene, £5. No. 1 Russian, £10 5s.

TURPENTINE.

The market has been very quiet, prices having a slightly downward tendency, namely :— American, Spot, 41s.; September to December, 42s.; January to April, 43s.

LIVERPOOL OIL MARKET.

August 29th.

Refined oils are quiet, and sellers quote 6½d. for Russian, Galician or Roumanian; and 6¾d. to 7¾d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0½d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, August 29th.

Refined, in cases, is steady at 10.90; Standard White, 8.45; Credit balances, 1.78c.

PHILADELPHIA, August 29th.

Standard White is still quoted at 8.40.

RUSSIA.

BAKU, August 27th.

The Baku oil market is firm. Light crude oil, spot, 32¼ copecs per pood; residuals, in ships 31 copecs; kerosene, in ships, 43½-44 copecs.

BELGIUM.

ANTWERP, August 27th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, August 24th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34.25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, August 24th.

The kerosene market is firm. The price of American Standard White is 7.25 marks per 50 kilos, Russian, 7.00 marks.

ROUMANIA.

August 23rd.

Crude oil from different fields, including pipe line charges, per 100 kgs.	Franks.
Refined oil, exclusive of taxes	4.10-4.20
Motor benzine, including taxes	8.00- —
Benzine, doubly refined	23.00-24.00
Residuals in tank waggons, at refinery	25.00-26.00
Paraffin	3.60-3.70
	120.00-125.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.00- —
Benzine, sp. gr. 0.710-0.715	23.00-24.00
„ sp. gr. 0.715-0.720	22.00-23.00
„ sp. gr. 0.730-0.740	15.00-16.00
„ sp. gr. 0.745-0.755	11.00-12.00

INDIA.

BOMBAY, August 6th.

Market strong.

Standard Oil Co., of New York.

Current rates are :—

American, "Snowflake," 150 deg.	Rs. 6 0 2
„ Chester, 125 deg.	4 8 2
„ Monkey Brand, 125 deg.	4 2 2
„ Bulk, 125 deg. (in local made tins)	3 11 0
„ „ 125 deg. (8 Imperial gallons)	3 1 0
„ "White Camelia" brand, 125 deg.	No stock.

The Asiatic Petroleum Company, Limited.

Current rates are :—

Burmah oil, in tins, per pair	3 7 0
Sumatra "Rising Sun," bulk, per unit	3 1 0
„ „ tins, per pair	3 11 0
Silverlight cases, per case	5 2 0
Sumatra, "Anchor" per case	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for .
this Journal by . . .
the Custom House. .

FOR THE WEEK ENDED 19TH AUGUST, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
Aug.	LONDON—			
13	E. J. Walkinshaw	Lub.	9,920	New York
13	T. H. Lee	"	50	Hamburg
13	J. Harrison	"	240	Antwerp
14	T. H. Lee	"	110	Hamburg
14	London and India Docks Co.	"	720	"
14	Fielder, Hickman and Co...	"	16,660	New York
14	Mordaunt Bros.	"	2,500	"
15	Anglo-American Oil Co. ..	"	73,400	"
15	H. Funck and Co.	"	600	Philadel.
15	H. and G. Dutfeld	Lub. Gr.	330	"
15	Schlieman's Oil Co.	Lub.	7,700	Hamburg
15	Page, Son and East	"	320	Antwerp
16	Mory and Co.	"	60	Boulogne
16	British Pet. Co. (Mira) ..	Lamp	1,410,000	New York
16	A. E. Piggott	Lub.	600	"
16	Fielder, Hickman and Co...	"	13,160	Philadel.
16	Lubricating & Fuel Oils, Ltd.	"	10,250	"
16	W. B. Dick and Co.	"	4,800	"
17	E. J. Walkinshaw	"	80	New York
19	G. W. Sheldon and Co. ..	L. Comp.	1,790	"
19	London and India Dock Co.	Lub.	4,560	Hamburg
19	Burt, Boulton and Heywood	Creosote	88,200	Salzaete
19	Page, Son and East	Lub.	680	Antwerp
19	Asiatic Pet. Co. (Strombus).	Benzine	17,700	Singapore
19	"	"	793,550	"
	LIVERPOOL—			
13	Liverpool Warehousing Co..	Lub.	8,000	New York
13	Vacuum Oil Co.	"	2,360	"
13	"	"	2,400	Boston
13	Bramwell, Fern and Co. ..	L. Comp.	800	Baltimore
12	C. W. Field and Co.	Lub.	290	Antwerp
14	Meade-King, Robinson & Co.	Resid.	4,800	Montreal
15	Anglo-American Oil Co. ..	Gas	696,150	Sabine
	(Tioga)			
16	Worthington and Boler ..	M. Colza	320	Philadel.
16	"	Lub.	520	"
16	W. B. Dick and Co... ..	"	26,630	"
16	Vacuum Oil Co.	"	8,000	"
16	Crew, Levick and Co.	"	14,540	"
16	"	M. Colza	7,060	"
16	George B. Taylor	Lub.	44,240	"
16	Meade-King, Robinson & Co.	"	40,960	"
16	"	"	10,400	Hamburg
17	Cunard Steamship Co. ..	Lub. Gr.	80	New York
17	Vacuum Oil Co.	Lub.	5,000	Portland
17	American Line	"	12,960	Philadel.
19	W. Gibson and Sons	Lamp	2,050	Boston
19	Pickford's	Lub.	190	Antwerp
19	E. H. Kellogg and Co. ..	"	1,800	New York
19	George B. Taylor	"	53,440	"
19	W. B. Dick and Co.	"	16,610	"
	BRISTOL—			
13	W. Smith and Co.	Lamp	800	"
13	"	Lub.	58,120	"

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Aug.				
16	H. R. James and Sons ..	Lub.	4,120	New York
16	First Anglo-Russian Oil Co.	Lub. Gr.	520	Hamburg
17	E. Stock and Sons	Lub.	2,100	"
19	Pickfords, Ltd.	"	450	"
	GOOLE—			
16	Lanc. and York. Ry. Co. ..	"	130	"
	GRIMSBY—			
16	J. Sutcliffe and Son	"	80	Antwerp
	HULL—			
14	Wilsons and N.E. Railway Shipping Co.	"	360	Hamburg
15	"	"	2,960	Antwerp
15	"	"	2,400	New York
15	"	"	89,320	"
15	W. Gilyott and Co.	"	20,000	"
15	W. Moran and Co.	Lamp	313,590	Batoum
	(Margaretha)			
17	Wilsons and N.E. Railway Shipping Co.	Lub.	480	Hamburg
	MANCHESTER—			
14	Bramwell, Fern and Co. ..	"	840	New York
14	W. Hodgson and Co.	"	1,220	"
15	G. B. Taylor.. ..	"	177,160	"
15	"	"	74,800	Philadel.
15	Worthington and Boler ..	"	1,000	"
15	J. T. Fletcher and Co. ..	"	860	Antwerp
15	W. Hodgson and Co.	Lub. Gr.	50	"
15	"	Lub.	2,390	New York
15	Liverpool Storage Co. ..	"	7,440	"
15	A. H. Dawson and Co. ..	"	2,400	"
15	Meade-King, Robinson & Co.	"	18,400	Philadel.
16	Crew, Levick, and Co. ..	"	6,820	"
16	"	M. Colza	2,580	"
16	W. Hodgson and Co.	Lub.	430	Hamburg
	MIDDLESBRO'—			
15	E. Harris and Co.	"	800	Antwerp
	NEWCASTLE—			
15	Tyne-Tees S.S. Co.	"	2,880	"
	SOUTHAMPTON—			
15	American Line	Lub. Gr.	480	New York
19	"	Lub.	60	"
	SWANSEA—			
15	Burgess and Co.	"	580	Hamburg
15	Richards, Turpin, and Co...	"	2,400	New York
	GLASGOW—			
15	Anchor Line	"	54,000	"
15	"	M. Colza	7,000	"
15	"	Lub.	3,660	"
	GRANGEMOUTH—			
17	J. Currie and Co.	"	8,860	Hamburg
17	"	"	800	"
17	W. Graham-Yooll and Co...	Lamp	3,600	"

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DATE	PORT AND IMPORTERS	DESCRIPTION	NO. OF GALLS.	PORT WHENCE.
Aug.	LEITH—			
15	W. Graham-Yooll and Co. ..	Lamp	2,970	Hamburg
15	J. Currie and Co. ..	Lub.	540	"
15	" ..	"	120	"
15	Henderson and McIntosh ..	"	70,480	Philadel.
17	" ..	"	60	"
Total for Week ..			4,368,690	

Deduct to Correct :—

LONDON—

11/7	Lubricating & Fuel Oils, Ltd. (Oural)	Lub.	667,830	Batoum
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FOR THE WEEK ENDED 26TH, AUGUST, 1907—

Aug. LONDON—

20	Anglo-American Oil Co. ..	Lub.	3,000	New York
20	Ragosine and Co. ..	"	2,280	"
20	Fielder, Hickman and Co. ..	"	12,560	"
21	London and India Docks Co. ..	Lub.Gr.	400	"
21	G. Jennings ..	Lub.	6,560	Philadel.
21	A. Brown and Co. ..	"	7,600	"
22	G. and H. Green ..	"	3,600	New York
22	Lubricating & Fuel Oils, Ltd. ..	"	8,200	Antwerp
22	Wilkins, Campbell and Co. ..	L.Gr.	240	"
22	Goodall and Co. ..	Lub.	2,090	St. Petersburg.
23	T. H. Lee ..	Lub.Gr.	400	Hamburg
26	London & India Docks Co. ..	Lub.	4,640	"
26	Burt, Boulton and Heywood ..	Naph.	2,800	Terneuzen
26	Wilkins, Campbell and Co. ..	Lub.Gr.	240	Antwerp
26	Page, Son and East ..	"	520	"
26	H. Hill and Sons ..	Lub.	2,100	Trieste
26	American Express Co. ..	"	250	New York
26	Perkins and Homer ..	"	4,000	Philadel.
26	E. J. Walkenshaw ..	"	2,800	"
26	Ocean Oil Co. ..	"	4,800	"
26	F. Randall ..	"	10,750	"

LIVERPOOL—

20	Geo. B. Taylor ..	"	640	New York
20	Burnaby and Chantrell ..	Lub.Gr.	620	"
20	Ismay, Imrie and Co. ..	Lub.	1,000	"
21	Valvoline Oil Co. ..	"	1,030	"
22	American Line ..	"	2,160	Philadel.
22	Bowring Petroleum Co. ..	"	1,660	"
22	Worthington and Boler ..	"	2,400	"
22	Meade-King, Robinson & Co. ..	"	71,160	"
22	Pickford's, Ltd. ..	"	90	Hamburg
23	Crew, Levick and Co. ..	"	19,350	Philadel.
24	Vacuum Oil Co. ..	"	6,720	New York
26	Cunard Steamship Co. ..	"	2,270	"
26	Valvoline Oil Co. ..	"	8,820	"
26	Burnaby and Chantrell ..	L.Comp.	80	"
26	Stockdale and Doel ..	Lub.	3,220	Boston
26	C. W. Field ..	"	210	Antwerp
26	Pickfords ..	"	270	"

BARROW—

26	Asiatic Petroleum Co. (Strombus)	Benzine	1,263,910	Singapore
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BRISTOL—

20	Anglo-American Oil Co. (Potomac)	Lamp	1,213,560	New York
20	" ..	Gas	86,000	"

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Aug.				
22	Anglo-Bosphorus Oil Co. ..	Lub.Gr.	6,240	Hamburg
22	Pickford's, Ltd. ..	"	1,550	"
22	H. Pritchard and Co. ..	Lub.	1,200	New York
22	Francis Barnard ..	"	400	"
GRIMSBY—				
21	J. Sutcliffe and Son ..	"	450	Antwerp
22	" ..	"	40	Hamburg
22	" ..	"	1,650	Antwerp

HULL—

20	Graham and Co. ..	Naph.	1,740	Reval
20	Wilsons and N.E. Railway Shipping Co. ..	Lub.	1,200	Hamburg
20	" ..	"	1,200	Antwerp
22	" ..	"	840	Hamburg
22	" ..	"	58,880	New York
22	W. Gilyott and Co. ..	"	92,440	Antwerp
22	" ..	"	4,800	"
22	Wilsons and N.E. Railway Shipping Co. ..	"	480	St. Petersburg.
24	Meade-King, Robinson & Co. ..	Naph.	18,000	Rotterdam
26	Wilsons and N.E. Railway Shipping Co. ..	Lub.	10,400	Hamburg
26	" ..	"	4,400	Antwerp

MANCHESTER—

20	W. Hodgson and Co. ..	"	5,140	Riga
20	Geo. B. Taylor ..	"	2,800	Philadel.
20	D. Currie and Co. ..	"	400	Hamburg
22	Meade-King, Robinson & Co. ..	"	20,800	"
22	" ..	"	10,400	"
23	" ..	"	3,040	Philadel.

MIDDLESBRO'—

26	Hanson Brown and Co. ..	Naph.	11,000	Rotterdam
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NEWCASTLE—

20	Tyne-Tees Steamship Co. ..	Lub.	1,000	Antwerp
22	" ..	"	40	Hamburg
24	" ..	"	1,320	Antwerp
24	Anglo-American Oil Co. ..	"	250,480	New York

PLYMOUTH—

22	Bristol Steam Nav. Co. ..	Lub.Gr.	250	Antwerp
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SWANSEA—

23	Burgess and Co. ..	L.Paste	190	Hamburg
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ABERDEEN—

20	R. Connon, Reid and Co. ..	"	120	"
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GRANGEMOUTH—

22	W. Graham-Yooll and Co. ..	Lamp	2,920	"
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LEITH—

22	G. Gibson and Co. ..	Lub.	250	Antwerp
22	J. Currie and Co. ..	"	820	Hamburg
24	W. Graham-Yooll and Co. ..	Lamp	1,420	"

BELFAST—

20	G. Heyn and Sons ..	Lub.	1,200	Riga
22	J. C. Pinkerton and Co. ..	"	400	Hamburg
26	Anglo-American Oil Co. (Delaware)	Lamp	758,260	New York

Total for Week .. 4,043,160
Total for the Fortnight .. 8,411,850

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVII. (New Series.)

SEPTEMBER 14TH, 1907.

No. 407.

Editorial Notes.

As we go to press, the Third International Petroleum Congress is drawing its proceedings to a close, and if we mistake not, the importance which has attended the whole of the gatherings must have come as a surprise to the majority of the delegates. Roumania has carried out its part of the contract in a remarkably creditable manner, and from the time when the delegates set foot in Bucarest until to-morrow, when the Congress will terminate at Constantza, the arrangements have been such that the most sanguine hopes of the most fastidious member will have been surpassed. In future issues, upon the return of Dr. Dvorkovitz, we shall, of course, dwell upon the arrangements more thoroughly, yet it is evident from the special reports which have reached the REVIEW during the week, that upon every hand the greatest enthusiasm has prevailed, not only on the part of the Congress delegates themselves, but on the part of the most humble villager in the oil field regions. Whatever good fruit the actual sessions of the Congress bring forth, it is safe to say that the educational excursions which have taken place to Roumania's oil fields have left a deep and lasting impression upon the minds of all who had the pleasure of taking part in them. From start to finish, the Congress has been one great success, but the benefits will become more apparent as time goes on.

As the Mayor of Campina most tritely pointed out at last week's luncheon to the Congress delegates, there is no doubt that the fact of the Congress having been held in Roumania will act as a great stimulus to the Roumanian petroleum industry, and arouse it—if it be possible—to fresh energy. But Mr. Stefanescu might have gone further, for he might have emphasised the benefit which is bound to follow the Congress—benefit which will be felt in other and far distant countries. Even Dr. Day expressed surprise at seeing such perfect and so methodically constructed installations in Roumania. There are few refineries in America with which Dr. Day is not directly acquainted, and it says much for the thoroughness with which they do things in Roumania, when we hear such words fall from a gentleman whose knowledge of petroleum matters is so wide. One thing is certain: the excursions alone have taught their lesson to the whole of the delegates who took part in them—a lesson that to permanently succeed not only must a sound policy be laid down, but it must be carefully followed year in and year out, and if one wants another instance of the way they do things in Roumania, the admirable arrangements for the Congress stand out as a striking example. In the next issue

of the REVIEW, we shall publish a full report of the deliberations of the Congress, in addition to many of the papers presented, while we hope to touch upon one or two subjects associated with the recent progress of Roumania, compiled from data connected in the various oil fields of the country by Dr. Paul Dvorkovitz.

The question of the use of oil fuel in this country is, at the present time, receiving great consideration on many hands. The demands of the coal miners for increased remuneration

have of late become so frequent, that large users of coal for commercial purposes are beginning to wonder when they will experience a lull in advancing prices. The present cost of coal is such that manufacturers are already instituting enquiries as to the prices at which oil fuel can be secured for forward delivery, and to us it certainly seems feasible for liquid fuel to now obtain a firm hold in this country. The temporary boom in America is, we are aware, responsible for the fact that more headway has not been made with oil in this country, but now that matters are there righting themselves, there is no doubt that before very long we shall see regular shipments of liquid fuel finding their way to this country, and, what is more, being rapidly taken up by those manufacturers who long ago have learned that, from a practical point of view, oil is immeasurably superior to coal as a fuel. As we say, the present position is full of promise for oil fuel, and events will be awaited with considerable interest.

According to a telegraphic report from Baku, the production of crude oil at the oil fields during the first half of August amounted to only 17,688,802 poods. The smallness of this figure is no doubt to some extent due to the strike on the properties of the Caspian Society, one of the largest producing firms, but at the same time it is having its effect on prices, which remain firm at their recent high level, crude oil being quoted 32-32½. This price, of course, prevents the trade returning to anything approaching normal conditions. The struggle between oil and other fuels remains in practically the same position, and part of the old markets for oil fuel now seem to be irretrievably lost, and coal and wood are displacing oil wherever the conditions are to some extent favourable for this end. Even on the Volga, the home of oil fuel, manufacturers and even shipowners are becoming more and more in favour of replacing oil by wood. Should the price of oil come down, all this will naturally be changed, but this is unlikely with a monthly production of under 40,000,000 poods; which shews no signs of increasing. This amount of production has now proved insufficient, not only for the liquid fuel markets, but even to supply the needs of the illuminating oil trade, the price of kerosene having lately risen enormously.

PETROLEUM EXPORTS FROM AUSTRIA-HUNGARY IN THE FIRST HALF OF 1907.

The following table shews the total exports of petroleum products from Austria-Hungary during the first half of 1907:—

	Tons.
Crude oil	3,943
Illuminating oil	53,962
Benzine	4,726
Other light refined products	1,902
Lubricating and other refined heavy oils ..	20,226
Residuals (liquid)	189
Paraffin scale (crude)	605
„ „ (refined)	6,206
Total	91,759

The total exports were distributed among the consuming countries as under:—

	Tons.
Germany	53,506
Hamburg	9,383
Switzerland	8,753
France	7,218
Turkey	3,640
Italy	2,634
England	1,559
Belgium	1,354
Russia	1,299
Other countries	2,413
Total	91,759

The exports to Germany consisted of 31,038 tons illuminating oil, 11,830 tons lubricating oil, 2,520 tons benzine, 1,138 tons other light oils (chiefly gas oil), and 3,043 tons paraffin scale. Hamburg is classed separately from Germany on account of its being a free port.

The imports of petroleum products into Austria-Hungary during the same period were:—

	Tons.
Crude oil	9,872
Illuminating oil	1,458
Lubricating oil	3,375
Heavy oils for manufacturing lubricating oils..	3,210
Other products	679
Total	18,594

The largest importer into Austria-Hungary was Roumania with 10,192 tons, including the 9,872 tons of crude oil. From the United States there was imported 4,500 tons of lubricating oils and lubricating distillates, whilst from Russia there was imported 1,700 tons of such products.

LATEST INFORMATION FROM GROSNY.

A refinery is about to be erected at Grosny with the special object of producing refined benzine from the light petroleum distillates. Owing to the peculiar nature of Grosny crude the need for such a special refinery has been felt for a long time. The refinery of the Kasbeck Syndicate has long ago passed into the hands of the Russian Standard Co., a creation of the Rothschilds. The last-named company has also taken over the properties of the Caspian and Black Sea Society, which now for a second time disappears from the list of Grosny producers. The Standard has lately shewn a general tendency to extend its operations, both on its old plots and on new plots recently acquired. The greatest amount of activity, however, continues to be displayed by the Spies Petroleum Co., Ltd., which has purchased a very large number of claims in the western part of the oil field. The Spies Co. is the first to take up the development of the lands of the adjoining village of

Bakan Yurt, without being daunted by the great depth to which it will have to drill. In the number of plots taken up the Spies Co. is now ahead even of the Akhverdoff Co., but in production it is still below the Anglo-Russian Maximoff Co., with its single plot. Confronted by the greater depths to which wells have to be drilled, the Grosny producers are now endeavouring to find more economic methods of working.

The workmen at the oil fields are remaining quiet. The council of the Grosny Petroleum Association has asked the Government for permission to hold the eleventh annual meeting in November.

LONDON OIL SHARE MARKET.

FRIDAY, SEPTEMBER 13TH, 1907.

General business on the London Stock Exchange has decidedly increased in volume since we last wrote, while the improvement in the monetary outlook augurs well for the autumn session, when an all-round advance is expected. Although selling orders for oil shares appears to have ceased, there is practically no dealing to chronicle, prices day after day being without change.

From the figures given in the last issue of the REVIEW the only alterations to record are an advance of 6d. in Shell Transport Ordinary on Monday, the 2nd inst., to 45s. to 46s., and on the next day an improvement of $\frac{1}{8}$ in Californian Oilfields at 5 $\frac{7}{8}$ -6 $\frac{1}{8}$. On Tuesday, Shell Transports lost 3d. at 44s. 9d. to 45s. 9d., and on the following Tuesday Californians reacted again to 5 $\frac{3}{4}$ -6.

Thursday's business resulted in a loss of a further 3d. per share on Shell Transport Ordinary, closing price being 44s. 6d. to 45s. 6d.

At the Mid-September Settlement, which commenced on Wednesday, the 11th, the account to be adjusted was of the smallest possible dimensions, and continuation rates were very easy.

A comparison of making-up prices with those fixed at end-August shews a little irregularity. Californian Oilfields have risen $\frac{3}{16}$ at 5 $\frac{13}{16}$, Shell Transport Ordinary improving 1s. 6d. at 45s. 3d., and Spies 6d. at 3s. 8d., while on the other hand Schibaieff Preference have fallen $\frac{1}{4}$ at 1 $\frac{3}{8}$, and the Ordinary 1s. at 3s. 6d. Russian Ordinary and Preference are both 6d. lower at 4s. 6d. and 5s. 6d. respectively, and Baku Ordinary is also 3d. easier at 3s., Anglo-Russians at 2s., and Baku Preference at 5s. 6d., are unchanged.

AN IMPORTANT PUMPING MACHINERY CONTRACT.

We understand that Messrs. Gwynnes, Ltd., of London, have secured an important order for pumping machinery from Messrs. S. Pearson and Son, for their oil fields in Mexico. Messrs. Gwynnes have for years past supplied a quantity of their centrifugal series pumps for oil field work in other parts of the world, but the present is the first electrically direct driven plant put down on such a large scale. The pumps are of the Gwynne-Sargeant patent centrifugal pressure type for delivering the oil to considerable heads, and through long lengths of pipes; over twenty sets are in hand at the present time, the whole being driven direct by electric motors without the intervention of belt or gearing.

The Third International Petroleum Congress at Bucarest.

A REMARKABLY
SUCCESSFUL . .
GATHERING. . .

(FROM OUR OWN REPRESENTATIVE.)

As was generally anticipated, the Third International Petroleum Congress at Bucarest has been a spontaneous success, and now that it is drawing to a close—for it will terminate with a banquet to the delegates given by the Commissioners of the port of Constantza on Sunday—it is easily possible to see how that success from the first has been achieved. The delegates from the various countries have all along received unbounded kindness from their Roumanian friends in the industry, and the great amount of hard work which the numerous arrange-

visited upon the subsequent days. The explanatory address was greatly appreciated by the delegates, who evinced much interest in it.

The following morning was not too promising so far as atmospheric conditions were concerned for the trip to the oil fields, yet the rain which fell at intervals did not in the least serve to damp the enthusiasm which the delegates shewed in the arrangements made for their enjoyment. At an early hour a special train was in readiness at the Gare du Nord to take the excursionists



GENERAL VIEW OF BUSTENARI.

ments for the comfort and enjoyment of the delegates have entailed has received adequate compensation by the fact that one and all have spent a most enjoyable time, and have doubtless greatly profited by their stay in Roumania.

Although the formal opening of the Congress did not take place until last Sunday, the majority of the foreign delegates—and they numbered over three hundred—had arrived at Bucarest prior to the preceding Wednesday, for it was on that day that they met in the halls at the University set aside for the Congress, and there obtained their badges and membership cards. The President of the Congress—Mr. A. Saligny—and the members of the Roumanian Organisation Committee were present, and accorded the delegates a most cordial welcome, furnishing them also with all the desired information concerning the organisation of the Congress.

In view of the excursion which was to start the following day for the oil fields, unusual interest attended the explanatory address of Prof. Mrazec, which took place during the afternoon, being based upon the tectonic conditions of the petroliferous regions which were to be

to Baicoi, which was reached about eight o'clock. Alighting here the delegates at once proceeded to the refinery of the Aurora Co., being much impressed upon their way by the many signs of welcome upon every hand, for all the petroleum installations at Baicoi had been richly decorated with international flags and garlands of flowers. The Aurora refinery had received special treatment at the hands of the decorators, and the sight which it presented will live for long in the minds of those who had the pleasure of being among the party of visitors. Here the delegates were received by Mr. Cottescu (one of the members of the Aurora board), Mr. L. Witte (the general manager) and Mr. Zentler (the assistant manager), the former gentleman extending a hearty welcome to the company on behalf of his colleagues on the board. He expressed the hope that the first visit of the Congress members to the Aurora refinery would mark the dawn of a new era of prosperity and development for the petroleum industry.

After partaking of refreshments, provided by the Aurora directors in their offices, the company then left and proceeded to the oil field of Baicoi some distance

away, the houses *en route* being most appropriately decorated, as was the oil field itself with flags of all nations. A most interesting inspection of the field was made, after which Tzintea was visited. By this time the weather, which had been showery, considerably improved, and, after the oil wells had been visited, the Congress members left in carriages for a drive through the Tzintea-Margineanca forest.

The drive was delightful, and appreciated by everyone, for the vast State forest is now looking its best. It was while in the forest that the excursionists enjoyed the hospitality of the Romano-American Co., for an exceedingly lavish luncheon was served. The managing directors of the company - Mr. N. K. Moody and Mr. M. Brower - together with other officials, received the visitors, and, after the luncheon had been partaken of, Dr. David T. Day, of the U.S. Geological Survey, in a few well-chosen words, expressed the warm thanks of the visitors to the company for so cordial and generous a reception.

Bustenari was then visited, the company proceeding thence *via* Recea in carriages, being headed by a number of mounted gendarmes. Along the whole route, the greatest enthusiasm prevailed, the population at various places giving the Congress members hearty ovations. After a three hours' drive, Recea was reached, and here as at Baicoi, the decorations were on a most lavish scale, a triumphal arch bearing international flags occupying a prominent place.

The members, after partaking of refreshments through the kindness of Mr. Ozinga and his staff, left for Doftanetzi, where they were received by all the engineers and managers of the properties, who came on horseback. In front of the wells at Faget-Stejar there was a triumphal arch erected by the Aquila Franco-Romana Co. Refreshments were offered to the excursionists in a pavilion erected by the roadside. Mr. E. Saladin, the manager of the Aquila Franco-Romana Co., surrounded by the whole staff of the company, received the visitors. On their way to Bustenari the excursionists passed under another triumphal arch, erected by the Bustenari Co., in front of their Stejar property. The aspect of the oil field was indeed a scene to be remembered; the derricks were all decorated with flags and verdure, and the shrill steam whistles of the boreholes announced the arrival of the party.

At the property of the Bustenari Co., thousands of workmen and peasants from the neighbouring villages lined the road. Visits were paid to the properties of the Telega Oil Co., the Steaua Romana, the Trajan Co., the Colombia Co., Seceleanu Bros., the International Co., the Bustenari Co., the Ialomitza Co., and other properties at Mislisora.

The excursionists greatly admired the panoramic view of Bustenari. The staff of the oil field shewed themselves indefatigable.

In the evening the visitors assembled in the beautifully decorated and illuminated pavilion erected by the Bustenari Co., where they were entertained to dinner by this Company. The gathering was presided

over by Mr. H. O. Schlawe, the general manager. Dr. L. Mrazec submitted the first toast in honour of His Majesty the King of Roumania, which was received with great enthusiasm and musical honours. Mr. Schlawe then proposed the prosperity of the international petroleum industry. In doing so, he expressed the joy which they all felt in having the honour to extend their hospitality in that corner of Roumania to the Congress delegates. In America and Russia, there were centres of petroleum development much more vast than theirs, but it was impossible to find a single other place so rich in the variety of international capital it attracted. There was also the same variety among the workers, for Roumania received all nations with the same warm welcome. The policy of welcoming the assistance of all nations had already borne much fruit, in creating and sustaining peace among all nations, and he trusted that those feelings of friendship which permeated all workers in Roumania would long continue.

Mr. Alexis Aron, delegate of the French Government, responded to the toast, thanking all for the hospitality extended to the Congress members.

After a well-earned, though perhaps too brief a rest, the delegates assembled at 6.30 the following morning in the pavilion of the Bustenari Co., and, after the Colombia Co. offered refreshments, the members divided in two groups and left for Campina, 30 of them being on horseback, and the others in carriages. At Telega thousands of the inhabitants, preceded by musicians, turned out to greet the Congress members. All the dwellings of the villagers are bedecked with flags and verdure, while the bridges over which the excursionists had to pass were also tastefully decorated.

The Congressists were received by Mr. George Spies, the general manager of the Steaua Romana, Mr. George Boamba, the managing director, all the chiefs of departments, and many of the employés.

They were then grouped in nationalities, bearing their respective flags, and a representative of the company was deputed to accompany each group during their visit to the refinery, and gave them all necessary information in their own language.

The population of Campina assembled on the road to the refinery of the Steaua Romana. The rural gendarmes and the police, in great force, rendered honours, while the mayor, the judge and representatives of all local authorities were present.

The Congress members breakfasted at the Steaua Romana refinery. In the afternoon visits were paid to the oil fields at Campina, Poiana, and Vrajitorea. Several foreign chemists made a detailed inspection of the refinery of the Steaua Romana, and were greatly interested with what they saw there. Dr. David T. Day, of the U.S. Geological Survey, remarked that the refining industry in Roumania, and more especially the refinery of the Steaua Romana at Campina, is being worked on more scientific lines than any of the refineries in America.

At the Poiana-Vrajitorea field, belonging to the Regatul Roman Co., explanations were given by Mr. A. Raky, the general manager, and Messrs. H. F.

Braun and O. Weidig. Several delegates visited the locality of Breaza during the afternoon, while Dr. Day and a few other gentlemen motored over to Sinaia.

The generating works of the Electrica Co. were inspected while the company were in the Campina field, this concern being responsible for the supply of the electric power required at the Campina and Bustenari wells.

In the evening, the town of Campina was brilliantly illuminated in honour of the visit of the Congress delegates, who were entertained to a banquet given by the Steaua Romana in the two large halls at the works. The larger hall was set apart for the leading officials of the Congress, and the banquetting table was presided over by Mr. George Spies, while in the second hall, the managing director of the Steaua Romana—Mr. George Boamba—took the chair.

After the usual loyal toasts, vociferously received, Dr. Day submitted a toast "in honour of Roumania." He said that, speaking for himself, he had inspected the wells, refineries and installations in that part of Roumania, and he had been struck with one thing which it would be impossible to find anywhere in America: it was 20 men exclusively engaged in a refinery in pure science, yet that was what they saw in the refinery of the Steaua Romana. He was so moved with admiration, and so touched with the most generous hospitality that had been extended to the whole of the delegates, that he asked the company to enthusiastically drink "in honour of Roumania."

Mr. Stefanescu, the Mayor of Campina, then, in the name of the town, extended a hearty welcome to the delegates, and trusted that the visit of the Congress to Roumania would be a fresh stimulant for further work and increased energy in the development of the petroleum resources of the country.

Prof. Leon Syrocinstu then proposed the health of Mr. Spies, which was enthusiastically drunk, after which Dr. Paul Dvorkovitz proposed a toast in honour of German capital in the Roumanian industry.

At the banquet in the second hall, the Chairman welcomed the company in the name of the Steaua Romana. He said it was with a feeling of honour that the Steaua Romana had the privilege of entertaining the Congress that day, and he had great pleasure in drinking to the healths of the delegates.

Prof. Wichelhous, of Berlin, expressed the thanks of the delegates for the reception accorded, which, he said, in every respect passed all expectations. He asked the company to drink to the continued success of the Steaua Romana.

At the conclusion of the banquets, the Congress members then took part in a most pleasurable fête arranged by Mr. Raky in the grounds of his villa, which was artistically decorated for the occasion, the fête not concluding until nearly daybreak.

On Saturday morning, September 7th, in spite of most miserable atmospheric conditions, the delegates assembled at the offices of the Trajan Co., where, after partaking of refreshments, a start was made for Moreni in carriages.

At Provitza, the delegates were received by the Mayor and the authorities, and the peasants greeted the excursionists with cheers. At Gura Dragonesei, Prof. Mrazec gave the excursionists an account of the tectonic nature of the locality.

The authorities and peasants at Edera received the excursionists with cheers. Many people assembled to welcome the delegates and threw flowers.

A large number of inhabitants awaited the arrival of the members at Moreni. The main road traversing the village was richly decorated with flags and flowers. The Moreni oil field, splendidly decorated with arches of evergreen intermixed with flags, presented a most pleasing aspect. At the entry to the oil field the excursionists were received by the Chief Government Mining Engineer of the district and the staff, the local authorities and a large number of peasants.

Visits were paid to the wells of the Regatul Roman Co., the Romano-American Co., and those of C. M. Pleyte. During the whole time Professor Mrazec gave explanations of the geological nature of this interesting region only recently opened up.

The Congress members examined with lively interest the sections of boreholes, samples of oils and analyses, very systematically arranged in a special pavilion. The company's model infirmary produced an excellent impression, and, as if for the occasion, No. 6 of the Regatul Roman Co. had an eruption.

After luncheon, which was given by Mr. A. Raky in the open air, Professor Mrazec thanked all the authorities, firms and persons, who had lent their aid towards the success of the interesting excursion.

The party then left for Baicoi, where later in the day they took a special train to Bucarest.

On Saturday evening, there was a special reception at the Ministry of Foreign Affairs, of the members of the Congress. There were present: Messrs. D. A. Stourdza, the Prime Minister, A. Carp, Minister of Domains, A. Saligny, President of the Congress, and the Members of the Roumanian Committee, and of course the whole of the Congress delegates.

A large number of persons, including members of the Corps Diplomatique, petroleum producers and refiners, representatives of finance, commerce and industry, and high officials of the State also took part in this reception, which was followed by concert.

THE OFFICIAL OPENING OF THE CONGRESS.

The official opening of the Congress took place on Sunday at the Athenée Palace. The President of the Congress took the chair, and upon the platform were the Prime Minister, the Minister of Domains, Mr. V. Mortzun (another Minister), and the official delegates of the foreign countries, in addition to the various Congress officials.

The first speech was delivered by Mr. A. Carp, the Minister of Domains, who, in the absence of the Crown Prince, welcomed all the members. He especially expressed his thanks to the various Governments who had sent representatives to the Congress. The Prime

Minister, Mr. D. A. Stourdza delivered an important speech, in which he sketched the history of the development of the petroleum industry and indicated the programme of future action.

The commencement of the Roumanian petroleum industry had been, he said, very modest, but thanks to indefatigable efforts, Roumania had reached its present state of progress. There were times, when in consequence of financial crises, the petroleum industry also suffered, but as soon as the crisis was over, greater energy was infused. The Government formed a commission to consider the country's mineral wealth, and so far the labours of that commission had yielded excellent results, and he could assure the Congress that the Government would stop at no sacrifice on behalf of the petroleum industry. The Government would shortly come forward with a series of new laws to give fresh impetus to the petroleum industry and trade. Apart from the question of the storage tanks at Constantza, which installation was to be extended, the Government was also considering the question of the navigation of the Danube, and nothing was left undone to bring up the various ports to a position in which they might be of service to the petroleum industry.

Mr. A. Saligny, President of the Congress, in a well-argued speech, shewed the importance of the Congress, and suggested sending to His Majesty the King and His Royal Highness Prince Ferdinand the following telegrams, which were agreed to by the Congress amid cheers:—

"TO HIS MAJESTY THE KING OF ROUMANIA.

"The members of the Third International Petroleum Congress assembled to-day at the opening meeting, beseech your Majesty to accept the expression of their most respectful homage and their profound gratitude for the reception which was accorded to them in the Capital of the Kingdom, and for the support which your Majesty, always ready to encourage all efforts which had as their object general prosperity, has kindly given to this Congress.

"A. SALIGNY, President of the Congress."

"TO HIS ROYAL HIGHNESS PRINCE FERDINAND OF ROUMANIA.

"The members of Third International Petroleum Congress, opened to-day at Bucarest, profoundly grateful to your Royal Highness for the patronage which you have deigned to accept, and convinced that the interest which your Highness has kindly evinced in the questions on the programme, has lent great support to those who have had charge of the organisation of the Congress, beseech your Royal Highness to accept the expression of their sincere warmest thanks.

"A. SALIGNY, President of the Congress."

The delegates of foreign states then each made a brief speech in the following order:—

Dr. C. Engler, Privy Councillor, Professor at the Polytechnic School in Carlsruhe, on behalf of Germany; Hans Hœfer, Professor of the Mining Academy at Loeben, on behalf of Austria; M. de Malachowski, Member of the Reichsrath, for Galicia; M. Louis Dejardin, Director-General of Mines at the Ministry of Industry and Public Works, for Belgium; Dr. David T. Day, of the U.S. Geological Survey, for the United States; Mr. Alexis Aron, Mining Engineer, for France; Dr. Paul Dvorkovitz, for Great Britain; Mr. S. Goulichambaroff, Mining Engineer, for Russia; Mr. Le de

Loczi, Professor at the University of Budapest, for Hungary; M. le Chevalier E. de Camerana, Chief of the Mining District at Bologna, for Italy; and Mr. A. Loudon, for Holland.

Mr. Saligny, the president, proposed to proceed with the election of the Bureau of the Congress. A proposal by Mr. Dejardin to appoint definitely the existing committee which has organised the Congress, was agreed to unanimously.

In the afternoon the Exhibition was visited, and in the evening the Congress members assembled in the Oteteleschanu Park, where a stage performance was given.

In our next issue we shall publish a number of the papers presented to the various meetings of the Congress,

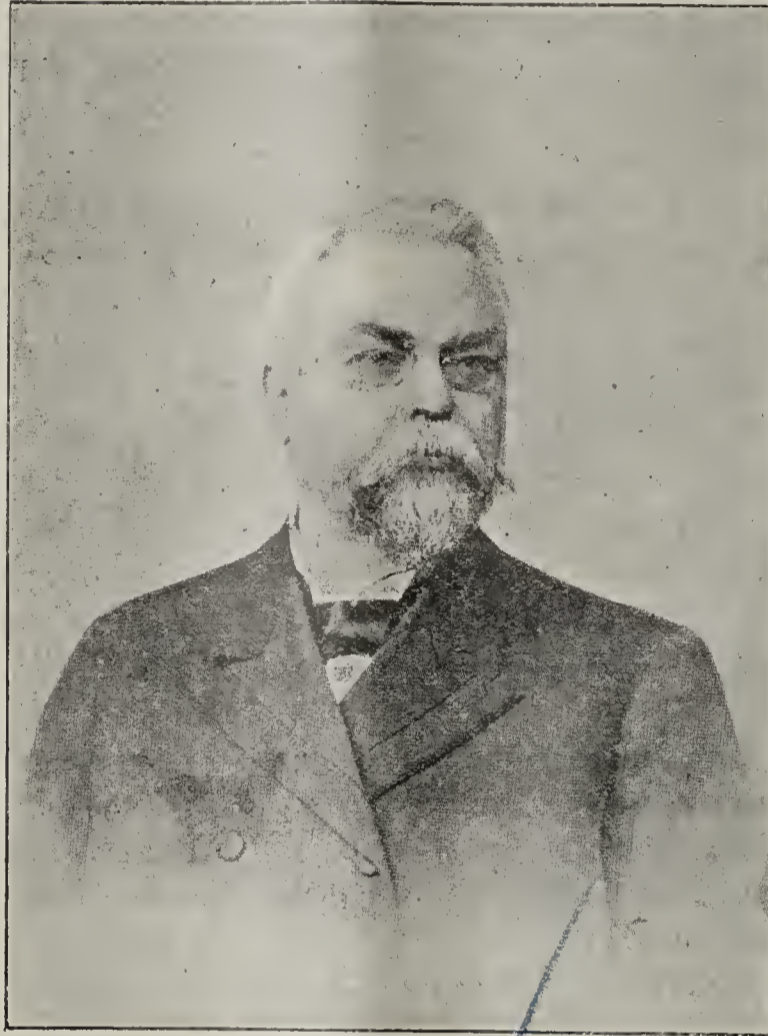
but owing to pressure, we are only able to publish in this issue the interesting paper submitted by Mr. A. Beeby-Thompson, upon the effect of geological structure upon the distribution of petroleum. It is as under:—

"THE EFFECT OF GEOLOGICAL STRUCTURE UPON THE DISTRIBUTION OF PETROLEUM."

The irregular distribution of petroleum in strata of a definite area and of an identical horizon has been the subject of much discussion among scientists, and many explanations have been advanced for mysterious phenomena surrounding the subterranean distribution and underground movements of petroleum and gas. The accompanying notes constitute some deductions following close investigations in several oil fields with which the writer has had professional acquaintance.

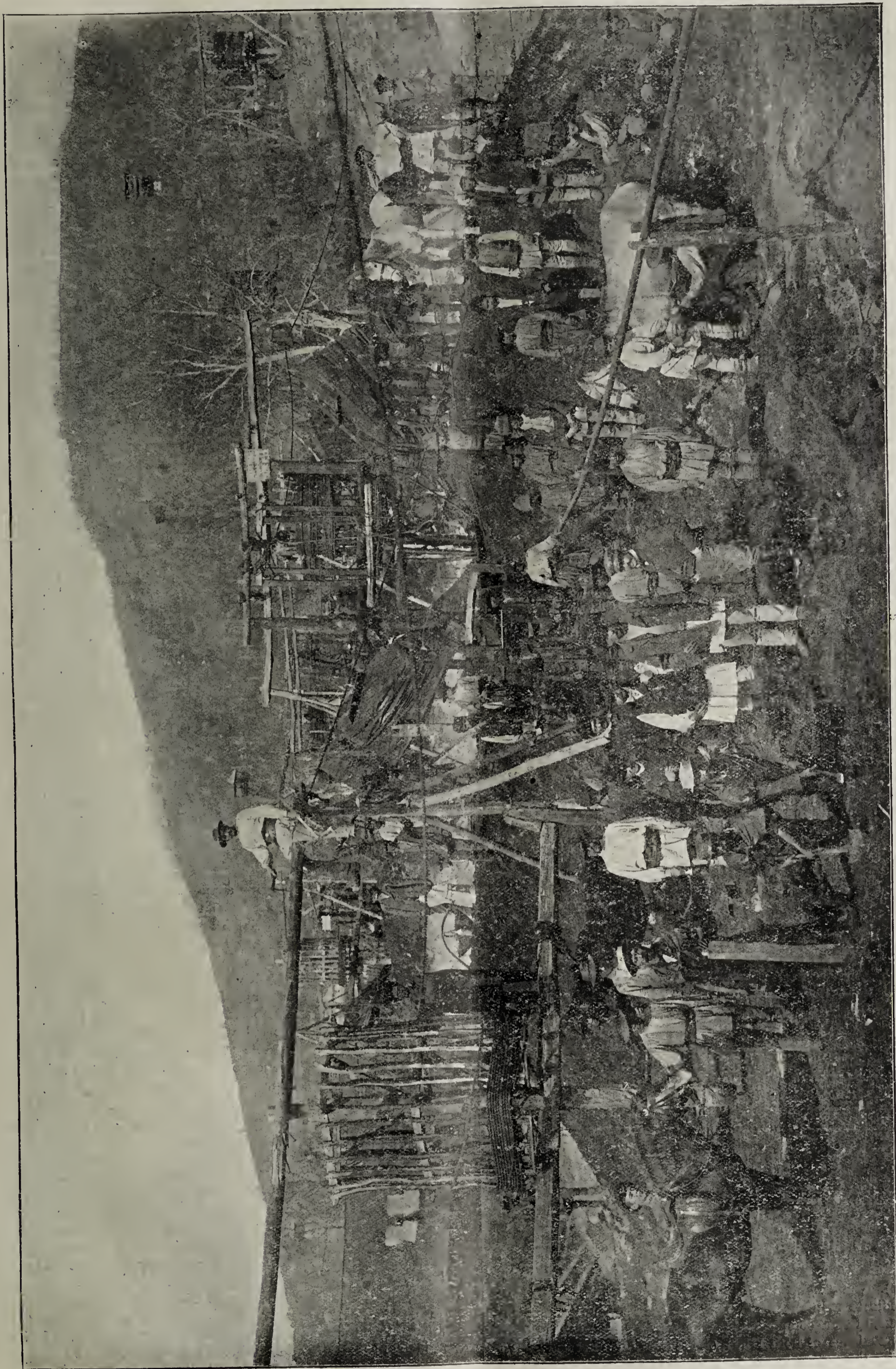
There are few oil fields where a regular, almost unbroken, series of geological strata continue for long distances, and where at almost any point a definite depth may be fixed with certainty for striking petroleum in fairly regular quantities. Some of the oil-bearing limestones of North America, where anticlinal structure is absent, do continue with great regularity over large areas, but the majority of oil fields display those erratic features which are the source of so much pleasure or despondency, as the case may be, to operators in most European oil fields.

Oil fields usually follow the course of more or less well-defined anticlines, the anticlinal structure transmitted to the beds being, generally, the determining factor in the production of the field, partly from bringing the oil-bearing strata within a workable depth of the surface, and partly from causing a concentration of petroleum



M. ANGHEL SALIGNY.
(President of the Congress.)

THE HAND-DUG WELLS OF ROUMANIA.



The above remarkable photograph, shewing a number of hand-dug wells in the Roumanian fields, is of much historic value, for each succeeding year marks the changing of the old order to the new. To-day the forest of derricks to be seen on every hand in Roumania's prolific fields proclaims the fact that the hand-dug wells are fast becoming a thing of the past.

and gas along the crests. In many oil fields the anticlines are exceedingly sharp, leaving only a narrow strip of ground along which the oil sources may be intercepted at a profitable depth, whilst in other fields a sufficiently extended crest has been formed to permit remunerative drilling over a wide area. At times, a secondary series of earth movements resulting from forces acting in a different direction has caused a series of anticlines to cross the primary at an angle with the production of conical structures into the domes of which the oil and gas have concentrated. There is no intention of dealing with the well known effect of anticlinal structure on the distribution of petroleum, but rather with subsidiary structure, which is probably responsible for that unequal distribution of petroleum which is the object of so much concern to oil producers in most petroleum fields.

Nearly every oil producer has observed numerous examples of single phenomenally large producing wells located amidst other wells which have proved non-productive, or only slightly productive, although sunk to the same depth, or much deeper, and in the same manner as the large producer. An explanation is simple in some cases where a high column of unexcluded overhead water has disguised the identity of the stratum, and excluded the gas and oil from entering the well until the total exclusion of the oil had been completed by the insertion of casing, but in other cases no such obvious conclusion is possible, and stratigraphical causes must be sought for the phenomena.

It is in the Russian oil fields that the greatest variations in the productivity of neighbouring wells have been noticed. In the Baku oil fields it is no uncommon occurrence for one well to yield nothing or a barely remunerative production of, say, 5 to 10 tons of oil daily only a few yards from a well from which 500 to 1,000 tons and more are daily obtained, even although the same horizon has been penetrated by both wells and similar oil sand reached. In Roumania and Galicia the same peculiarity is common, although not on such a great scale as in Russia, where isolated wells have yielded 15,000 tons of oil daily.

Such enormous fluctuations of yield between wells separated by but a stone's throw, call for some extraordinary explanation, for it is quite evident that were the oil sources homogenous, unbroken and of but slightly differing thickness, such variations would be impossible. From recent investigations the writer attributes these fluctuating characters of wells to three principal causes, viz. :—

- 1.—Faulting and common fissuring.
- 2.—Local variation in composition of strata.
- 3.—False bedding.

The study of subterranean movements of water are instructive, but in that case hydrostatic forces alone usually come into play, and there is no gas pressure to be considered as there is in oil, still the effect of faults and fissures on the distribution of water is well understood in water supply work.

Where severe folding movements have thrust upwards ridges of strata, considerable dislocation has generally resulted, especially where the beds were hard and compact and not of a yielding character. Whilst clays and marls readily respond to a deflection without often sustaining much dislocation, sandstones and limestones would be fractured causing fissures that would be transmitted to intermediate beds of softer material.

Faults of varying throw are usually an inevitable sequel to such severe strains as the strata of most anticlines have been subjected in their formation, and these lines of weakness in conjunction with the fissures have an important connection with the movements of gas and oil when high pressures come into force.

An examination of almost any series of oil rocks exhibits both faulting and fissuring. In the barren valleys around the Baku oil fields, sections of the oil series shew these features, and on the cliffs overlooking the Bebe-Aibat valley faults of fifty feet throw have been located. In other parts of the Caucasus, where oil-bearing series of rocks are exposed, the same features are observable, and in Peru where some of the finest geological sections in the world are visible, innumerable lines of fault can be traced traversing the extensive oil-bearing tertiaries of that country. Similarly, excellent views of such fissures may be seen in the oil sands of Trinidad and Barbados, especially in coast sections in the former island. Sometimes the fissures shew a sharp cut and close contact, whilst in other cases the lines of fissures have been filled with disintegrated material or solidified petroleum products (bitumen). Occasionally a series of mud volcanoes or asphalt cones indicate a line of open fracture from whence petroleum gases issue, often accompanied by some oil.

The prevalence of both kinds of fissures have not only been noticed by the writer in sections of oil-bearing formations, but their influences upon the production of wells noted in several widely separated fields.

The effect of fissuring would not be of so great importance to a fluid unaccompanied by gas, but under the influence of high gas pressures, and especially the intense subterranean excitement that follows the penetration of oil sources, these fissures represent lines of weakness which become attacked, just as they frequently do on the surface of the ground by atmospheric agencies when unprotected by surface deposits.

In the Russian oil fields, extremely high gas pressures are encountered, and sometimes thousands of tons of sand, rock and fragments of clay are daily dislodged from the surrounding strata, and ejected from spouting wells. These great producers have often been the sequence of a trial baling, or have followed a cementation where there was no trace of oil sand prior to the appearance of the oil, and one can only surmise that oil has either broken in from a neighbouring source or has found its way into the well by means of a fissure in the strata communicating with an oil sand in the proximity. A great deal of evidence has been collected in recent years which appears to indicate a predominance of the latter cause. One of the most remarkable wells in the Baku oil field that yielded no less than 300,000 tons of oil in about five years was eventually taken in hand for repairs as a result of damage and partial exhaustion. The well had been sunk on a plot where there were two well-known strata of oil sand separated by beds of clay at 1,400 and 1,500 feet, from both of which sources several wells were drawing supplies of oil near by. The abnormally prolific well had been completed in the 1,400 feet stratum, but when six years later the repairs were undertaken the depth of the well was found to be nearly 1,500 feet deep, proving that a connection had been established between the two sources, and consequently accounting for the extraordinary production. In this example, the boring had probably either penetrated or nearly established communication with a fissure crossing the two oil sources which became so opened up by the gas and agitation of the ground during the period of flowing that not only was direct communication completed, but a cavern formed of sufficient size to allow the 14-inch casing to slip down nearly 100 feet.

A Baku well drilled under the writer's immediate supervision entered dry clay devoid of oil indications, but yielded, on exclusion of the overhead surface water by a cementation, not less than 100,000 tons of oil in a year, and many thousands of tons of sand unlike any struck during boring. Three other wells drilled to equal depths within 20 yards, 30 yards and 60 yards respectively failed to give remunerative productions of oil near the same depth, although one well was sunk prior to the highly productive one. In such a case one can only surmise the occurrence of a fault fissure, along which oil from one or more sources of a different depth finds admission to the well. In another example under the writer's observation, fishing operations were suspended after a year's attempts to recover some lost tools, and on a baling being undertaken to remove a collection of oil which was supposed to have soaked into the well, a fountain developed and played periodically for months during which time thousands of tons of sand were ejected unlike any found during drilling. On undertaking repairs to damaged casing twelve months later, no trace of the lost tools, upon which so much time had been wasted, was found, although the well was deepened to a lower source.

In Bebe-Aibat a number of wonderful producers were found to be located along a line of fault which extended to the hills behind where it could be detected and its throw ascertained by direct measurement. So much importance was attributed to this discovery that wells were located with a fixed intention of striking this fault line at a considerable depth. Naturally, it is only very rarely that the strata are exposed sufficiently to enable such features to be located, as most regions have superficial alluvium deposits which conceal such data.

On the Negritos oil fields in Northern Peru, where the oil beds can be traced on the surface of the ground over an area of fifty square miles, the writer located a number of faults, whilst over an area of about four square miles where over 250 wells have been drilled, ranging from a depth of 500 to 2,000 feet, the adverse influence of faults was proved, although curiously the greatest producer ever struck on that field was an exception and proved to be on a line of fault. On the Peruvian field actual demonstration shewed that in nearly all cases the proximity of faults was injurious and almost fatal to the success of a well, and a number of dry wells and small producers were eventually proved to be in close proximity to lines of fault which stretched across the country. In this example the strata bordering on the large faults were much disturbed, and there is little doubt that in the majority of cases these fissures have resulted in the escape of much oil and gas in their vicinity, rendering the beds barren. There is a wide difference between the Russian and Peruvian strata, for whilst

the former are generally loose sands with high gas pressures, the latter are hard compact sands, the oil from which yields but a trace of sand on pumping, whilst the gas pressures are low.

It will thus be seen from the preceding remarks that faulting and fissuring of strata does play an important part in the distribution of petroleum, and whilst in some cases the faults may prove advantageous, in others their effect is decidedly injurious.

The benefits derived from producing artificial fissures in oil-bearing strata are fully realised in some of the American fields, where the oil-bearing rocks are hard, and charges of nitro-glycerine and other explosives are fired in wells to induce an increased flow of oil. Periodical renewal of these explosions usually causes an additional temporary influx of oil, owing to the production of further fissuring. In most oil fields the strata is so spongy that the discharge of large quantities of explosives produces no practical result, the evolved gases simply dissipating into the surrounding ground, but where high gas pressures are encountered, the excitement set up by the discharge of so much oil, gas and sand produces a somewhat similar result, but more effective in the particular soft strata pertaining.

The writer in 1902 made some interesting experiments with explosives in the Baku oil fields, but although as much as 60 lbs. of dynamite were exploded in wells no benefit was derived. The artificial introduction of large volumes of oil into a well has at times been marked with notable results. In the year 1902 a big flowing well on the Bebe-Aibat field yielded so much petroleum that not only were the pumps inadequate to remove the oil, but all storage accommodation became filled, and the oil flowed over the neighbouring properties. When the oil reached a certain level it commenced to flow down an abandoned well on one of the adjoining estates with the result that after a while this oil well developed into a fountain, and flowed for several days, during which time much more oil was ejected than had flowed into the borehole. This was an evident case of new untrapped strata being opened up by the underground agitation and excitement set up by the admission of great volumes of liquid, petroleum beds being opened up which had never been in touch with the well, and but for this unusual agitation would never have been in communication with the well.

The writer made the following comments when dealing with the subject in a publication in 1903:—

"When in the Baku district, a fountain is flowing, the disturbance created in the oil stratum must be terrific, for the surface of the ground quivers for a radius of a quarter-of-a-mile, and the noise produced by the violently expelled oil, gas and sand can be heard for miles. It may be impossible to accurately describe the subterranean movements at such moments, but a little consideration will inevitably lead one to construct a mental picture of the kind of active changes taking place a thousand or more feet below the surface.

"It is not improbable that the larger fountains in the Baku oil fields are partly due to the excitement or reaction occasioned by a flow of oil. At first, oil steadily overflows the casing, through supersaturation with gas; but immediately the heavy column of liquid is partly expelled, and a large part of the resistance removed, a violent rush of gas, carrying with it oil and sand, occurs towards the shoe of the tubes, with the result that exit is suddenly closed, and a violent check is momentarily imparted to the moving mass in the earth. For an instant the slow movement of a solid plug in the tubes prevents further admission to the tube; but as the upper pressure is still more relieved, and the pressure of the gas below rises, the temporary resistance of the sand-plug is overcome, and the mass is ejected with terrific impetuosity up the tube. The sudden relief of pressure thus afforded causes another inrush of sand, and the action just described is repeated. There is, in fact, a constant water-hammer action going on in the sand stratum, which probably plays no small part in opening up oil ground for a considerable area around the borehole, an area that would, but for this 'excitement,' remain unaffected."

In relation to the subject of the distribution of oil it might be mentioned that much valuable information has been obtained from examinations of native bitumen mines in Russia, Barbados and Trinidad. The native bitumens that are actively worked in many districts consist, almost exclusively, of the heavier products of petroleum which have risen from deeper oil sources and filled fissures in the superincumbent beds. These native bitumens are almost exclusively intrusive, and the veins in which they occur constitute an accurate and permanent record of the fissuring the containing beds sustained during earth movements.

During the last few years the writer has examined a number of bituminous mines in the neighbourhood of oil fields in different parts of the world, and the information afforded by such reliable records

of subterranean fissuring has led to a far better understanding of the conditions which doubtless exist in many oil fields. The fissures from which the solid or semi-solid bitumens are extracted run in a direction that bears some rough relation to the strike, but the veins take no definite direction, but follow irregular courses. The veins of bitumen only occasionally take the course of stratification, and are usually found in highly inclined strata where severe flexuring has been in operation. In only one case under the writer's observation was the strata of a character that would allow of its dissolution by water, the crevices being evidently true structural fissures or lines of faults. The large worked veins of native bitumens usually occur in clays, and in such strata fissures are to be observed which steadily open up from a few inches in width to several feet, whilst intricate subsidiary folding often opens up a pocket which contains hundreds of tons of bitumen. One vein in the Vista Bella mine of Trinidad widens to a lenticular pocket 30 feet wide.

Whilst fault fissures may act as important media for the underground movements of oil, and under great excitement become opened up to crevices of considerable dimensions, it will be understood that they are sure to become most dangerous channels for the admission of water to the oil sources after the partial exhaustion of the beds and the diminution of the gas pressure. This has actually proved to be the case in the Russian oil fields, where all methods of water exclusion have failed in the neighbourhood of many great producers, solely because the water has not gained admission by wells, but through opened up fault and other fissures which extend to water-bearing beds. Many deep wells sunk, under the writer's supervision into partially exhausted ground on the borders of formerly large producing properties, have been quite free from water when completed, but after a brief period of baling, water, admitted to the strata from adjoining properties, broke in and flooded the wells.

Another cause for the unequal distribution of oil is without doubt the formation of channels (which may possibly follow lines of fracture) of low resistance through the sands from which a big producer has drawn large supplies of petroleum. An old isolated well will often continue to yield a remunerative production of oil in an almost exhausted area when new wells sunk in the neighbourhood and penetrating the same source will yield practically nothing. This appears to be due to the above-named production of channels formed when high pressures existed and communicating with the well in all directions. A new well, unless striking one of the main arteries, will yield little oil in such exhausted ground, as the oil courses cannot be readily diverted after the gas pressures have diminished to zero. As an example a case could be mentioned where several new wells sunk in a nearly exhausted area failed to yield anything but a mere trace of oil when sunk into an oil stratum, but an old well cleaned out to the original depth gave a production of 40 tons daily.

Another well known peculiarity which largely influences the distribution of petroleum in oil strata is the curious change an arenaceous stratum undergoes from hard unimpregnated or slightly oil permeated rock to a loose productive oil sand. The writer has had many examples of this change under his immediate notice in the Baku oil fields, and has at times collected interesting statistics regarding this effect on the productivity of wells. In one case out of several under careful observation exemplifying this characteristic, two wells located within a short distance of one another penetrated the suspected stratum at the estimated depth, but in one case the oil sand was of a loose flowing description which was raised with the oil in great quantities, whilst the second well penetrated a hard sandstone through which the oil issued slowly along fissures, unaccompanied by anything but a trace of sand.

The characters of the wells were totally different. The well sunk in loose sand yielded much gas, had a high and fluctuating level of liquid, shewed a tendency to flow when baled, and formed big plugs of sand at intervals that required clearing with sand pumps. The well in hard rock did not yield such volumes of gas, could be baled almost dry in a few hours, and yielded no sand plugs, although periodical cleaning with a sand pump led to the recovery of a large number of fragments of hard sandstone which had become detached from the stratum. In each case the sand was identical, the rock being simply a consolidation of the sand by impregnation with carbonate of lime which had acted as a cementing material, and the dissolution of the lime by dilute hydrochloric acid led to the crumbling away of the rock and the production of a sand similar to that found in the first-named well. The interesting problem of whether the oil has caused the dissolution of the carbonate of lime in some parts and not in others, or whether carbonate of lime has hardened some parts of the sand

and not the other is a scientific problem which will not be touched on here, but the well-known phenomenon in the Baku oil fields is not confined to those fields, for the writer observed the same feature when investigating the oil fields of Peru in the springs of 1906 and 1907.

In examining some outcrops of strata on the Negritos oil fields in Peru, sections were found on the sides of hills where oil impregnated soft sand strata about six feet thick gradually changed into dry calcareous sandstone without any trace of petroleum. The oil-bearing sands which are held together by impregnation with petroleum are so friable that they can be crushed with ease, whilst the unimpregnated calcareous sandstone but a few yards further along the bed is intensely hard and can scarcely be fractured by blows from a geological hammer.

It will be seen from the above how wells may be sunk in the vicinity of prolific oil sands with only poor or negative results and under such circumstances as those described it is only where the strata are fractured or are split by fissures that oil is admitted to wells which penetrate the unproductive portions of beds of a well-known and often far-extending oil horizon. These lateral variations of sands are a prominent feature of some districts of the Baku oil fields where the hard variety of stratum predominates, and whilst great producers are rare in such areas, drilling is easy and the casing suffers far less damage as a result of the absence of loose flowing sands. The prevalence of the hard sandstone is shewn by the frequency with which the boulders and nodules of the sandstone are ejected from flowing wells or raised from baling wells, and when repairs are undertaken to Baku wells, it is not uncommon to raise many tons of fragments and sandstone nodules which have accumulated around the base of the well.

A sample of the Baku calcareous sandstone gave the following percentage composition on analysis:—

Sodium Chloride	..	..	..	..	0.247
Sodium Sulphate	..	..	..	..	0.580
Sodium Carbonate	..	..	..	..	1.436
Calcium Phosphate	..	..	..	..	0.306
Calcium Carbonate	..	..	..	..	30.627
Magnesium Carbonate	..	..	..	..	1.510
Iron (Sulphide)	..	..	..	..	2.542
Sand (with some iron pyrites)	..	..	..	..	63.164

False bedding is a common characteristic of petroleum bearing sands, and the writer has observed examples of this peculiarity in a number of sections. Where sands are subject to strong and varying currents such as false-bedding indicates, considerable differences in the thickness of beds may be anticipated. This structure, where present, has a very decided influence on the distribution of petroleum, as the sands of a particular horizon vary greatly in thickness, and may even thin out and disappear for a distance only to thicken again further along. The lenticular structure is very pronounced in the Baku oil fields, where rapid alternations of sand and clay and occasional thick deposits of sand are to be found. There is no doubt that this characteristic is often responsible for the fluctuating production of oil wells; those wells penetrating the thicker portions of the sand yielding larger productions than those entering the sands where they are thin. On the Baku fields an oil sand at a well-known horizon will be entirely pierced in ten feet, whilst in another position the same horizon contains forty to fifty feet of sand. Faulting alone could not account for the frequent differences in thickness of the oil sands, as in the Baku oil fields many hundreds of wells have been drilled in such a small area that a sand of any regular thickness would be easily recognisable over a wide area. Whilst well-known horizons are known, there has never been any sand of definite thickness located in the Baku oil fields over any considerable area.

On the coast sections in Trinidad, the writer saw excellent sections of oil-bearing sands from four feet to fifty feet in thickness, and in each case false bedding was a prominent feature clearly exhibited by slight variations of colour or contamination with impure matter along the lines of bedding.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 12th September, 1907, as follows:—

Makers are getting some relief in the price of materials, although coal—which is an important factor in the cost of producing tin plates—is gradually getting dearer, and in order to meet the market, prices have been further reduced, and we make oil sizes to-day:—

1c	18½ × 14	124 sheets	110 lbs.	14/9	to	15/0	per box.
1c	19½ × 14	120	..	110	..	14/9	..
1c	20 × 10	225	..	156	..	20/10½	..

F.o.b. Wales. Tin lining and iron hooping extra.

BATOU M PETROLEUM EXPORT TRADE DURING JULY.

The petroleum export trade of Batoum during July was rather small, and the total shipments for June and July, taken together, were only 6,348,000 poods. A comparison of the case oil shipments during those two months, 400,000 and 438,000 poods respectively, shews that there has recently been no tendency toward an increase on the volume of trade. The reduced demand for oil in the summer season, coupled with the great advance in the price of kerosene, has adversely affected the case oil export trade, and caused a shrinkage in the output of case oil factories. The same may be said of lubricating oils, the exports of which remained on the same level as in June.

The following are the figures of the deliveries of oils from Baku, shipments from Batoum in July, and also the stocks at the end of July:—

	Deliveries from Baku in July. Poods.	Shipments from Batoum in July. Poods.	Stocks at Batoum on July 31st. Poods.
Refined Kerosene	.. 3,164,000	4,576,000	3,485,000
Kerosene Distillate	.. —	—	26,000
Solar Oil	.. 60,000	209,000	41,000
Machine Oil	.. 864,000	1,077,000	593,000
Spindle Oil	.. 86,000	96,000	48,000
Cylinder Oil	.. 26,000	50,000	35,000
Vaseline Oil	.. —	72,000	16,000
Lub. Oil Distillate	.. —	—	12,000
Residuals	.. 289,000	248,000	276,000
Other Products..	.. 11,000	20,000	6,000
Total	.. 4,500,000	6,348,000	4,537,000

Of the total quantity of kerosene which arrived from Baku in July, 136,000 poods came in tank waggons and the rest through the pipe line.

The stock of kerosene, if not large, at least seems sufficient for current needs. However, if we exclude the stock of 1,820,000 poods owned by Nobel Bros., there is left for the remaining eight or nine firms only 1,665,000 poods. There are some exporting firms who have scarcely any stock at all. The stocks of lubricating oils are also far from sufficient.

The shipments in the last two months were distributed among the different consuming countries as follows:— To the United Kingdom there were shipped altogether 1,665,000 poods, to Germany 1,029,000 poods, whilst to France only 151,000 poods. The shipments to France usually consist chiefly of kerosene distillates, and these are now supplied to her by Roumania. To Holland and Belgium there were shipped 901,000 poods, which is also less than in former times. To all other European countries there were shipped only 9,000 poods. Turkey and the Balkan States took 785,000 poods, Alexandria and other North African ports 619,000 poods, and the Far East, to which shipments were only resumed in June, accounted for 86,000 poods. To Russian home ports there were shipped 262,000 poods.

Change of Address.—Our readers will kindly note that the head offices of the British Mannesman Tube Co., Ltd., have been removed from 110, Cannon Street, E.C., to Salisbury House, London Wall, E.C., to which latter address all communications should now be forwarded. The telegraphic address will remain the same, but the Telephone No. will now be 4610 Wall.

NOTES FROM ALL QUARTERS.

RUSSIA.

Grosny Production.—The total production of crude oil at the Grosny oil fields in the first half of 1907 amounted to 18,747,063 poods, against 20,008,397 poods in the first half of 1906. The decline is due solely to the falling off in production by spouters, namely, 2,160,910 poods, against 5,538,245 poods. The production by baling shews an increase by more than 2,000,000 poods.

The Russian Vacuum Oil Company, hitherto a private firm owned by Messrs. A. Elrich and Co., and owning a petroleum refinery at Muhlgraben, near Riga, is now being transformed into a limited liability company. The founders are Mr. F. Kirstem, of Riga, Mr. O. F. Gilert, of Batoum, and Mr. G. E. Radetzky and Mr. R. G. Lier, of Riga. The capital of the company is 1,200,000 roubles. The company propose to extend their trade both in illuminating and lubricating oils.

Grosny Paraffin Scale.—Some three years ago it was discovered that Mr. James MacGarvey's borehole in Grosny yields an oil containing 2.5 to 2.7 per cent. of paraffin scale. It is interesting to note on the north-eastern outskirts of the Grosny fields and there is just the possibility that it may mark the beginning of a new oil zone yield—a paraffinous crude oil has been discovered. Unfortunately, nothing has been done so far to investigate this matter, and the crude oil from this well is treated in the same manner as ordinary Grosny oil, i.e., the light oils are distilled off, and the rest used as fuel.

AMERICA.

The Washington Pioneer Oil Co. has been formed with a capital of \$250,000 with the object of developing placer mining claims in the Virgin City oil region.

An Important Transfer.—An important deal has recently been completed in the Coalinga field of California, whereby the Associated Oil Co. has acquired a controlling interest in the Shreeve Oil Co. for, it is stated, \$200,000.

New Corporations.—The Riley Oil Corporation for the development of properties in Indiana (capital \$50,000), and the Bradley Oil and Gas Co. to operate in Illinois (capital \$60,000), are two of the most recently formed oil companies in America.

The Texas Co.'s Gulf Line.—Work is rapidly progressing upon the Texas Co.'s Gulf Line, and a month ago over 270 miles had been completed. Part of the completed pipe is already being used for the transportation of Glenn crude oil. This company's line will run *via* Humble.

Fullerton Attracts Attention.—The *Oil, Paint and Drug Reporter* states that the Fullerton field has recently been visited by parties interested in the European oil business with a view to the acquisition of several oil leases. It is also reported that the members of the party were deeply impressed with the vast resources of this district.

In Search of Oil.—An expedition has started from Oregon City to follow the traces of oil along the San Juan river, owing to news having been received that oil has been discovered in San Juan county, in South-eastern Utah. Neighbouring counties are also believed to contain oil in commercial quantities.

ROUMANIA.

A Good Yield.—At Mislisora, the Trajan Co. has struck oil in their well No. 25. In baling this well large quantities of sand are extracted. The yield of oil, however, is at least 30 tons daily.

The Bustenari Co. has also met with great success in their well No. 64, which produced violent eruptions from a depth of 350 metres. This well now yields about 60 tons of oil daily. This well is situated at Doftanetsi, and is about 300 metres away to the south of all the other wells.

The Telega Oil Company has recently had some prolific eruptions from their borehole No. 121 at Calinet. This well was commenced on June 2nd, and drilling was completed in 20 working days. The first trial baling took place on July 21st, and shewed a yield of 30 tons daily. The water has been effectively shut off. Abundance of gases give ground to the hope that after it has been deepened this well may increase its yield to a very large extent.

BAKU PRODUCTION OF CRUDE OIL IN THE FIRST HALF OF 1907.

The total production of crude oil at the Baku oil fields during the first half of 1907 amounted to 235,730,997 poods, of which 6,400,000 poods were obtained from spouters.

The production of the leading firms in the first half of 1907, compared to the corresponding period of 1906, was as under:—

	1907. Poods	1906. Poods.
Aramazd Co.	6,164,241	6,075,610
Assadulaeff	2,860,628	6,252,955
Baku Naphtha Co.	12,183,427	19,868,764
Baku Russian Petroleum Co. Ltd.	6,434,255	6,970,000
Bibi-Eybat Petroleum Co., Ltd.	5,761,500	4,845,000
Caspian Society	13,378,893	11,881,491
Caspian and Black Sea Society	18,902,580	17,440,455
European Petroleum Co., Ltd.	3,536,116	2,561,200
Kalantaroff and Co.	2,736,000	2,495,000
Kavkaz Co.	2,390,425	1,706,219
Mantascheff and Co.	10,853,585	11,025,063
Mirzoeff Bros and Co.	7,070,150	5,676,785
Moscow-Caucasian Co.	7,054,036	11,431,598
Nagieff, M.	4,805,661	6,067,818
Naftalan Co.	5,481,214	3,780,355
Nobel Bros.	31,952,001	32,151,369
Neft Co.	3,502,500	2,840,250
Pitoeff and Co.	8,286,156	5,880,100
Rossiskoie Naphtha Co.	1,050,221	1,796,700
Russian Naphtha Co.	6,960,200	5,715,030
Russian Petroleum and Liquid Fuel Co., Ltd.	4,358,000	6,392,000
Schibaieff Petroleum Co., Ltd.	6,450,907	4,868,395
Shikhovo Co.	2,883,766	2,616,786
Ter Akopoff	2,553,350	4,101,427
Tiflis Co. (Bebe-Aibat)	2,722,500	2,578,820
Zoubaloff	7,560,000	6,990,000

In the Canadian Fields.—Notwithstanding continued drilling, the Tilbury fields are holding up very badly, the most recent details shewing a decreasing production. Some of the operating concerns are losing faith in the territory.

From West Virginia.—At the present time West Virginia is particularly active, it being stated that more new wells are now being started than at any other time during the present year. This is presumed to be on account of the good market now prevailing.

An Illinois Gusher.—The latest information to hand concerning the Illinois fields is to the effect that another well has been drilled in Martin township of the gusher order. At the start it gave about 1,000 barrels. This gusher is situated only a short distance from the one that a short time ago yielded 8,000 barrels in a single day.

The Ohio Oil Company's Activity.—A communication from Marshall, Illinois, states that the Ohio Oil Co.'s tank farm is progressing very rapidly. On the Martinsville farm, over 130 tanks have already been completed, while others are being constructed, while on the Bridgeport farm in Lawrence county, twenty tanks are completed.

Batoum Shipments.—The following were the shipments of petroleum products from Batoum during the week ended 18th August (o.s.), in poods:—

	Illuminating Oil.		Other Products.	
	1906.	1907.	1906.	1907.
To Europe	263,000	568,000	140,000	220,000
To the East	309,000	426,000	—	3,000
To Russian Ports.	1,000	110,000	6,000	8,000

From 1st Jan. to 18th Aug. :—

To Europe	9,107,000	11,182,000	5,356,000	6,592,000
To the East	4,418,000	7,418,000	40,000	124,000
To Russian Ports	2,042,000	1,574,000	164,000	131,000

During the week ended 18th August, 1907, there were also shipped 77,000 poods of Residuals to Europe, and from 1st January to 18th August, 124,000 poods.

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING AUGUST.

THE SHIPMENTS INTO VARIOUS PORTS.

The following table gives the details of the various shipments of petroleum products into the ports of the United Kingdom during the month of August. In all the shipments amount to 23,486,660 gallons, a figure which falls below that of July, when a record was

reached. During the past month, as compared with July, the imports of illuminating oil decreased by about one-half, but those of benzine were more than double what they were for the previous month:—

	Lubricating.	Illuminating.	Residuals.	Benzine.	Other Products	Fuel.	Gas.
Aberdeen	120	—	—	—	—	—	—
Barrow	—	—	—	1,678,690	—	—	—
Belfast	1,870	758,260	—	—	—	—	—
Bristol	116,300	1,751,260	—	—	6,600	—	86,000
Cork	120	—	—	—	—	—	—
Dublin	170	1,955,450	—	—	—	—	—
Dundee	3,990	—	—	—	200	—	—
Glasgow	346,210	—	—	15,000	18,000	—	—
Goole	730	—	—	—	—	—	—
Grangemouth	13,080	11,560	—	—	—	—	—
Grimsby	3,290	—	—	—	—	—	—
Hull	552,470	726,090	—	19,980	4,400	—	—
Leith	76,530	9,180	—	—	—	—	—
Liverpool	953,290	4,100	4,800	24,970	17,340	—	6,6150
London	697,570	1,428,630	—	3,507,670	91,480	—	3,916,620
Manchester	795,450	2,382,880	—	—	20,150	—	—
Middlesboro'	3,640	—	—	11,000	—	—	—
Newcastle	262,330	—	—	—	600	—	—
Plymouth	280	—	—	—	—	—	507,000
Southampton	790	—	—	—	—	—	—
Swansea	4,370	—	—	—	—	—	—
Totals	3,832,600	9,027,410	4,800	5,257,310	158,770	—	5,205,770

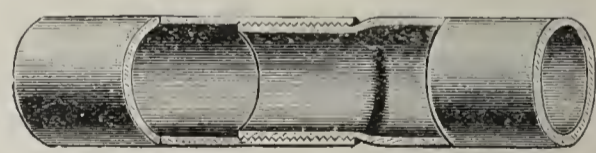


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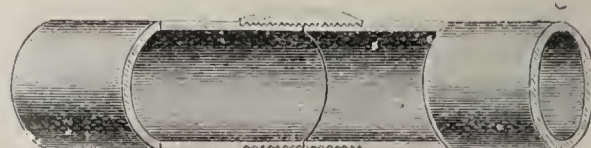
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ARE OIL ENTERPRISES SAFE INVESTMENTS?

THE question of the safety or otherwise of investments in petroleum companies is a subject which is receiving a considerable amount of attention on the part of the public, and the arguments put forward are so diversified that it is highly interesting and at the same time important, to view the matter in an unbiased light, and to come to a conclusion thereon, which is substantiated by fact.

For the past few decades, speculation in petroleum enterprises has become an increasingly important section of finance; by some, huge returns have been made through the medium of concerns which at first were looked upon as highly speculative, while on the other hand, many there are who, to their sorrow, have become interested in companies formed for the purpose of prospecting for, and producing and selling petroleum.

No matter to which petroleum producing country we look, the same two extreme cases can be cited. Side by side with companies upon whom fortune has smiled, other concerns have laboured under the cloak of misfortune, and so, while the praises of petroleum invest-

ments have been sung, another voice has simultaneously been loudly raised against their safety. In the latter case, however, the failures—miserable failures for the most part—have been few, and, after all, there is little justification why so large a circle of investors, especially in this country, view every petroleum concern with some amount of fear.

One very remarkable fact is that the majority of petroleum companies held up by English capital and it is these which have given rise to pessimism on the part of the public—are those which started upon no wild-goose chase in search of oil-bearing territory which they might never strike, but were concerns formed to acquire lands known to be rich in petroleum, or even better still, to take over existing firms whose successful career rendered a profitable future almost beyond the shadow of doubt. We are all acquainted with the lot which has befallen the £7,000,000 of English investments in petroleum enterprises in the Caucasus, for the fact that the present market value of this sum is somewhat under £2,000,000 tells its own tale. The majority of these Anglo-Russian companies started their career under conditions which gave ample promise, and the non-fulfilment of the hopes held out to the investing public constitutes a sad page of oil finance history.

Each company in turn took the path laid down for it by incompetent leaders whose ulterior motives sometimes shewed themselves above the intricacies of company management, and the result—the inevitable result—has been disaster brought about by no other than those at the helm. The statement has frequently been made—and there is much truth in it—that had the concerns had no management at all, but been left to their own fate, the end would have been far more favourable to the investors than that which to-day stares them in the face consequent upon sheer mismanagement. But even in the case of these several unfortunate concerns, the future is not without a ray of hope, and we are optimistic enough to look forward to the time when the present mystery which permeates the air in which these companies exist, will clear and give place to an atmosphere through which the investors will see the certain return of their locked-up capital with interest sufficient to compensate them for these anxious times of patient waiting.

This much-to-be-desired period will not naturally be brought about without an effort on the part of the investors themselves to put their house in order, but the present activity which is to be noted among certain sections, and which has taken the form of concerted agitation, cannot but be viewed as a most hopeful sign of future success.

As answering the question of the safety of petroleum investments, and at the same time bearing in mind the unfortunate position of the Anglo-Russian Companies, we would remind our readers that the Russian companies operating in the Caucasian fields are, almost without exception, concerns of the most solid description, carrying on a continuously profitable business, the like of which as regards dividends, would be hard to find in

any section of British commerce. While the English-managed concerns have been going from bad to worse, those Russian petroleum companies working alongside them, yet managed by persons possessed of practical knowledge, have, year in and year out, been steadily improving their positions, until now we find the two extremes side by side—on the one hand, companies operating yet unable to do more than make both ends meet, and in some cases not that, and on the other, producing concerns whose profits have never been greater than at the present time.

So far as Russia is concerned, it is plain that the oil investments certainly ought to be of a character which lifts them above the ordinary class of “speculatives,” and the fact that they have not during recent years been dividend paying is due entirely to the properties having lacked proper management, and the responsible directorates going forward without any fixed policy.

The continued depression in this class of stock, due solely to the causes above mentioned, finds no parallel elsewhere, so that it is a grave mistake to condemn petroleum enterprises all round by reason of the recent non-success of Anglo-Russian companies in the Caucasus.

One has only to recollect the various English oil companies operating in other parts of the world to be impressed with the profitable nature of petroleum investments as a general rule. Without a single exception, the Scotch companies are shewing splendid results, while those shareholders who are associated with the shale operations now being carried out in the Antipodes have also much cause for congratulation. The success, too, which has attended English enterprise in the Far East in the production of petroleum needs no words of commendation here, and if we look at the result of the introduction of British capital into the fields of California, we likewise see that, generally speaking, profitable petroleum investments are the rule and not the exception.

Thus then, it is clear that though, as in all commercial enterprises there must necessarily be some amount of speculation, petroleum investments may be classed as being of an order which warrants the attention—the serious consideration—of the investing public. The pity is that the vast fields in Russia which at one time stood in so favourable a light with the British investor, have of late, by a policy of mismanagement which cannot be too severely criticised, not yielded that return which one and all had a right to expect.

THE OIL TANKER BOOM.

It is estimated that the aggregate value of the oil-tank steamers building at the present time in this country does not fall short of £1,250,000. The first launches will take place about December, and some thirteen or fourteen new steamers will start to carry petroleum in bulk before next summer. The latest contract placed is with Messrs. Armstrong, Whitworth and Co., of Newcastle, who have contracted with Messrs. Balfour, Williamson and Co., for the construction of an oil-tank steamer to carry about 7,000 tons, and to steam 11 knots.

THE CRISIS IN THE GALICIAN PETROLEUM INDUSTRY.

The difficulties in the way of the development of the Galician petroleum industry are gradually being smoothed over. After touching 10 kronen per ton the price of crude oil has again increased to 16 kronen. The spouter on the Wilno property has moderated its yield from 80 to 50 tons per day, and the production generally is becoming more stable. Huge crude oil tanks have been erected, which are capable of holding enormous quantities of oil. It is interesting to note that the Vacuum Oil Co., which by continuous buying of crude oil from the outsiders prevented them from joining the Petrolea, and thereby precipitated the crisis, have now, notwithstanding their empty tanks, stopped buying. There is now some talk of compelling the company by law to give its tanks up for storage of crude oil.

There are rumours at last of an intended restriction of output, but this would be very difficult, almost impossible, of attainment. Firms engaged in drilling for oil will not stop until they have struck the oil, which would otherwise be drawn off by their neighbours.

The price of crude oil having somewhat recovered and settled down, outside circles have begun to extensively interest themselves in the industry by the acquisition of shares in small petroleum enterprises. By extensive advertising, small investors are attracted to take up these shares, a fact which causes the development of fresh properties at a forced rate, in order to get a chance to sell shares, and this has very largely contributed to the collapse of prices.

The question is now asked as to whether prices for refined oil will also decline. This is not likely for the present, as the refiners are still working under old contracts for crude oil supplies at comparatively high prices. There is also to be considered the consumption tax of 130 kronen per ton on illuminating, which restricts consumption. On the other hand, the prices of by-products have lately declined.

The Austrian Government has accorded a special reduced railway rate for crude oil exported to Germany for a quantity not to exceed 150,000 tons per annum, which is to be used for gas making. The railways are also making large purchases of fuel oil. For the present the storage facilities of the railways are too small to have any effect on the over-production, but later considerable quantities of oil will probably be utilised for fuel purposes. No exaggerated hopes must, however, be based upon this outlet, as the production of fuel oil in Galicia is not such a simple matter as in Russia. Galician crude oil contains a larger percentage of light oils which have to be eliminated, and the residua's contain a great deal of paraffin scale, which likewise has to be removed before a safe and fluid fuel oil can be obtained, so that fuel oil can only be considered as a bye-product. The large refinery which the crude oil producers propose erecting is intended to serve this purpose, but there will remain the old difficulty of disposing of the 50 per cent. of refined oil.

The inadequacy of the railway installations at Bory-

slaw, Ostrau and Oswiecin stations, and the shortage of tank waggons tend to aggravate the effects of the over-production, but it is hoped that in this matter relief will soon be afforded.

The crude oil production in Galicia in July reached the unprecedented figure of 110,000 tons, of which Boryslaw yielded 21,000 tons and Tustanowice 76,000 tons, the rest being distributed among all other Galician oil fields. Should the output continue for the rest of the year at this level, the total output for the twelve months will reach about 1,200,000 tons. All the refineries in Austria-Hungary, including the refinery of the French company now in construction and the projected extensions of other refineries, will be capable of treating barely 1,100,000 tons, so that all the refineries will be unable to refine the whole crude oil output. The projected producers' refinery is to have a capacity of 100,000 to 150,000 tons, but its realisation is still far from certain.

The following table, taken from a report on the Galician petroleum industry submitted to the Government by the crude oil producers, shews at a glance the gradual development of the Galician petroleum industry and trade:—

			Crude Oil Production, in Tons.	Petroleum Consumption in Austria-Hungary, in Tons.	Price of Crude Oil, in Kronen, per Ton.
1890	..	..	91,650	169,500	71.60
1891	..	..	87,720	170,400	70.80
1892	..	..	89,870	170,700	61.00
1893	..	..	96,330	177,400	62.40
1894	..	..	132,000	197,000	58.20
1895	..	..	202,070	201,100	47.40
1896	..	..	337,760	212,100	40.00
1897	..	..	309,630	219,500	42.80
1898	..	..	323,140	226,300	50.80
1899	..	..	321,680	218,200	51.50
1900	..	..	326,360	219,700	60.80
1901	..	..	452,000	233,700	56.90
1902	..	..	576,000	243,300	28.20
1903	..	..	713,330	251,100	25.40
1904	..	..	827,120	246,100	29.60
1905	..	..	801,790	246,800	28.50
1906	..	..	760,440	247,200	24.00

The amount of German capital invested in the Galician petroleum industry is estimated at over 30,000,000 marks. These investments are mostly of quite recent date. This year alone, companies were formed in Germany for the Galician oil fields of an aggregate capital of several million marks.

Several large producing companies in Galicia intend to stop drilling some wells started by them. Amongst the measures contemplated for regulating the production is said to be a proposal to issue regulations forbidding the deepening of a borehole, which already produces 100 tons or more daily. The deepening operation shall be carried on only in daylight to minimise the danger of fire and avoid too violent eruptions.

Fire at Messrs. Major and Co.'s Works.—A fire broke out one evening last week at the works of Messrs. Major and Co., Ltd., of Hull. Fortunately the fire was confined to one department, and the execution of orders will in no way be affected. This statement of fact stands out in strange contrast to the many exaggerated reports that have appeared in the daily press, all of which not only spoke of the buildings having been entirely destroyed, but that burning oil poured into the river. Mr. H. E. Hanson writes to assure us that the buildings were not even seriously injured.

THE PETROLEUM INDUSTRY OF ITALY.

A brief review of the petroleum industry in Italy is given in a *Chem. Zeit.* The article states that there are three producing districts in the country; the Emilia in the provinces of Parma and Piacenza, the Abruzzi district, and in Sicily. The Emilia district is the only one of the three in which exploration has been carried out in a modern and rational manner. The first well was bored in 1860. It was 70 metres deep and yielded about 50 litres of naphtha per day. In 1870 a French company was formed which bored several wells and succeeded in obtaining a very good product. A refinery with a capacity of 600 metric tons per day was established in 1880 in Borgo St. Dounino. Later two other refinery plants were built in Fiorenzuola and in Mailano, and boring was carried on by the Caucasian system with the best results.

The greatest part of the Italian petroleum comes from Montechino and Velleia, in the province of Piacenza. A French company was organised in 1903 with a capital of 1,200,000 francs, and this concern was the first to apply modern and systematic methods to the exploration of Montechino. As a result of the efforts made, the yearly output increased from 800 in 1903 to 2,000 tons in 1905. This company in 1905 had 28 wells in operation, and had exploited only about one-ninth of its concession.

The region about Velleia is exploited by the Société Française du Pétrole, which in 1905 had an output of 1,890 metric tons. This company operates a refinery at Montechino. Both of these companies are in good financial condition, having paid 40 per cent. dividends in 1905. In 1906 the Società Petrolia d'Italia was

formed in Genoa. It not only purchased both of the above companies, but also set itself energetically about the task of exploring all the petroleum deposits of the country. Italian petroleum is especially adapted to the extraction of benzine, which is of considerable importance to the country on account of the increasing value of the petroleum industry; it is less suitable for yielding lubricating oil. In 1905 the output of naphtha amounted to 20,000 metric tons.

COMPLETION OF THE FIRST TRUNK PIPE LINE TO THE GULF OF MEXICO.

More than ordinary interest attends the announcement of the completion of the first pipe line from the Mid-Continent fields to the Gulf of Mexico—a proposition first suggested in these columns several years ago by Dr. Dvorkovitz. As readers of the REVIEW are aware, several trunk lines are now being laid to relieve the congestion of oil in the prolific fields of the Mid-Continent, the line just completed being that of the Gulf Pipe Line Co. This line is of eight-inch diameter, and has been constructed from the Glenn pool to Sour Lake, Texas, at which place it joins the six-inch line already in operation to the Gulf Refining Co.'s refinery and docks on deep water at Port Arthur. The first piece of the pipe was laid about the middle of last February, so that the whole line was completed in about six months. From the northern terminal point to Sour Lake, where the eight inch pipe joins the two six-inch ones, the distance is something over 400 miles. It is estimated that it will take about 125,000 barrels of oil to fill the pipe the entire distance, and thus make it ready for service.

GALICIAN PRODUCTION DURING THE FIRST HALF OF 1907.

According to official statistics just published the production of crude oil at the Galician oil fields during the first six months of 1907 was as under (in tons):—

	January.	February.	March.	April.	May.	June.	Total.
Western Galicia—							
Potok	1,310	1,400	950	1,020	1,310	1,350	7,330
Rogi	420	560	575	891	927	940	4,313
Rowne	94	110	155	185	109	189	842
Tarnawa-Wielopole-Zagorz	1,234	1,286	1,250	1,280	1,250	1,250	7,550
Krosno	2,355	2,020	2,500	2,780	2,405	2,600	14,660
Other West Galician Fields	2,210	2,100	2,160	1,820	2,200	2,150	12,640
East Galicia—							
Boryslaw-Tustanowice	53,070	51,020	62,300	62,500	74,290	88,120	391,300
Schodnica	3,300	3,500	3,900	3,200	3,350	3,200	20,450
Urycz	1,280	1,200	1,150	1,120	1,100	1,100	6,950
Mraznica	120	60	80	340	50	50	700
Other East Galician Fields	1,020	960	1,020	1,040	1,200	1,060	6,300
Total	66,413	64,216	76,040	76,176	88,181	102,009	473,035

The total stocks of crude oil at the Galician oil fields at the end of June amounted to 444,418 tons, of which 401,140 tons were produced at Boryslaw-Tustanowice.

DETAILS OF BAKU PRODUCTION AND BORING DURING JUNE, 1907.

The following are the details of the production of crude oil at the Baku oil fields during June, as published in the latest issue of the *Neftiannoie Dielo*:—

	Number of Wells in Exploitation.	PRODUCTION (in poods).				Average per Well per Day.
		By Baling.	By Spouters.	Casual.	Total.	
Balakhany	686	6,331,242	—	7,254	6,338,496	319
Saboontchi	635	14,866,039	—	345,707	15,211,746	820
Ramany	200	7,313,344	—	13,599	7,326,943	1,262
Bebe-Aibat	223	10,494,253	507,303	30,819	11,032,375	1,895
Total in June, 1907	1,744	39,004,528	507,303	397,379	39,909,560	799
Total in May, 1907	1,699	38,885,624	90,906	481,661	39,458,191	790
Total in June, 1906	1,502	37,945,955	216,200	297,423	38,459,578	922

The production by spouters in June was obtained from the following wells:—Nobel Bros., well No. 27, on plot No. 27, at Bebe-Aibat, 488,603 poods; and the Russian Bebe-Aibat Co.'s well No. 10, on plot No. 11, also at Bebe-Aibat, 18,700 poods.

The Production of Asphalt in America during 1906.

During the year 1906 the output of asphalt in America broke the record, amounting to 138,059 short tons, valued at \$1,290,340, as against 115,267 short tons, valued at \$758,153, in 1905, according to the annual report of the United States Geological Survey. It will be noted that the increase in 1906 was 20 per cent. in quantity, but 70 per cent. in value, the rise in the average price per ton of the product being due to the increased percentage of the high grades used largely in the manufacture of varnishes, paints, etc.

The term asphalt is used in the report of the Survey in its broader sense as commonly applied, and is made to include both the natural and the refined forms of viscous or semi-solid bitumen, which is perhaps properly termed asphaltum, a similar but usually more liquid hydrocarbon termed mastic, derived from bituminous rock, and a refined by-product, an almost pure bitumen, obtained in the distillation of certain crude asphaltic oils. The last named class is termed oil asphalt, and is now refined in large quantity on the Pacific and Gulf coasts of the United States. In addition to these the term asphalt is made to include the series of solid hydrocarbons or asphaltites specifically named wurtzilite, gilsonite, grahamite, etc. Ozokerite, a true hydrocarbon, a mineral wax, is a natural paraffin, and has been classed statistically with asphalts.

The following table represents the output of all classes of asphalt for the last six years:—

Year.	Quantity. In Short Tons.	Value. \$.
1901	63,134	555,335
1902	105,458	765,048
1903	101,255	1,005,446
1904	108,572	879,836
1905	115,267	758,153
1906	138,059	1,290,340

Very extensive deposits of asphaltic shale and sandstone are found in California in and contiguous to the oil fields from the vicinity of Santa Cruz south-eastward, generally parallel with the coast line. The bitumen permeates porous sandy strata, and exudes at the surface from highly bituminous oil-bearing deposits. The asphalt in this region appears, for the most part, to be a natural residue from the same crude oil from which oil asphaltum is recovered by distillation in the California oil fields at the present time.

Indian Territory, Texas, Kentucky and Utah contain also extensive deposits of bituminous rock. The bituminous rock in Indian Territory is found chiefly in Chickasaw Nation. The bitumen here occurs in ordovician, carboniferous and cretaceous sandstones and in ordovician limestones. The market product in this field has been in the form of bituminous rock and mastic. The bituminous rock in Texas is an asphaltic sand and limestone occurring in the basal cretaceous of Montague and Burnet counties, an asphaltic limestone of upper cretaceous age in Nueces county and the asphaltic limestone of Uvalde county, which appears to be of greater importance at the present time than the bituminous sandstone. This limestone is very porous,

the interstices and cavities containing a semi-solid asphalt equal to 14 or 15 per cent. of the whole rock. The asphalts of Kentucky occur as bituminous impregnations of carboniferous sandstone in the western part of the State, principally near Garfield, Letichfield, Beespring and Russellville. They occur in beds of flat-lying rock and have been interpreted as residues in what were once subterranean oil pools.

The oil asphalt produced in various stages of refinement in California and Texas seems to meet all demands made of an asphalt. In the more liquid state it is a road dressing and a coating as paint for wood or iron substances, and it is used in the manufacture of building papers. In the refined state it is a practically pure asphalt, being free from earthly silts commonly carried by the natural product. It seems to be growing in favour in the trade as street paving material, as roof tiling and for all other uses to which an asphalt is commonly applied. Although hampered in its use by long freight haulage, yet large quantities are introduced into the markets of eastern United States for paving purposes.

The total production by varieties in 1906 is given in the table presented below. A great increase in 1906 was recorded in the production of hard and refined or gum asphalt, due chiefly to the new refinery development in Texas, though the production in California in 1906 is more than 100 per cent. in advance of the total for 1905. Likewise the great increase in the production of maltha, more than twice the total output for 1905, is due to the Texas industry. California stands almost alone in the output of oil asphalt, with a large increase over the production of 1905. A very small production is reported from Texas. In certain reports of the production of wurtzilite and uintaite by single operators the two classes were not distinguished, and hence the production of the two is included together in the table. There are reasons to believe that the production of wurtzilite was small as compared with that of uintaite.

Variety.	1906.	
	Quantity. In Short Tons.	Value. \$.
Bituminous sandstone	24,085	70,686
Mastic	2,543	24,158
Hard and refined or gum	24,178	341,106
Liquid or maltha	9,900	86,750
Wurtzilite and gilsonite	12,947	159,960
Grahamite	1,952	16,432
Oil asphalt	62,454	591,248
Total	138,059	1,290,340

The imports of asphalt of all kinds in 1906 aggregated 120,082 short tons, valued at \$484,679. About two-thirds of the asphalt which is imported into the United States from foreign countries comes from the island of Trinidad, off the coast of Venezuela. Other important sources of the material are Venezuela (Bezmudez), Cuba and Italy. Smaller quantities are imported from Switzerland, Germany, France, and Turkey in Asia, with insignificant quantities from the United Kingdom, Colombia and Austria-Hungary.

THE EXTENSION OF THE JENNINGS OIL FIELD.

What appears to be the most important event which has occurred in the Texas-Louisiana oil region since the bringing in of the Humble oil field at the commencement of 1905, is the completion of a self-flowing well quite outside the proven area of the Jennings field, which is now producing 3,000 barrels daily. Thus the decreasing yield of the Jennings field is now stayed, and the prospects of a largely increased production are excellent. The new well is in virgin territory, being a quarter of a mile south of the former limits of the proven area, and adds not less than fifty acres of productive land to the field. When it is remembered that of the entire 26,000,000 barrels of oil so far obtained from the Jennings pool, fully 24,000,000 barrels came from an area not more than fifty acres in extent, comprising portions of the Arnaudet, the Latreille and the Crowley oil and mineral tracts, the significance of this latest gusher is manifest. The new well is located a little north and west of the centre of a 200-acre farm, all but a very small portion of which is under lease to the Producers' Oil Co., of Houston. Forty acres of this tract, forming the north-west part of the 200-acre piece, was the subject of litigation in the Louisiana courts, a final decision having been rendered in June by which the lease on the property given by Latreille to the Jennings-Heywood Syndicate was declared void and the title of the Houssiere-Latreille Oil Co. was upheld. The Producers' Oil Co. is a sublessee under the Houssiere-Latreille lease, and by its lease controls almost the entire 200 acres. The 40 acres involved in the suit have frequently been appraised at a valuation of \$1,000,000. The importance of this latest well, therefore, become apparent, as it is located south of the 40-acre tract and proves all of it and a portion of the 160 acres in addition. Along the south line of the Houssiere-Latreille tract, on the King land, two wells are now being drilled which will determine whether the oil sand extends beyond the southern limits of the 200 acres on which the new well is located. These two tests, says the editor of the *Oil Investors' Journal*, are

over 1,500 feet from the flowing well of the Producers' Oil Co. One of them is 2,000 feet distant. It seems to be the opinion of the operators that the trend of the field is south-east, all past development having been north-west and south-east.

LATEST DETAILS FROM NEW ZEALAND.

Our special correspondent writing from Gisborne on July 13th, states that a syndicate has recently been formed to prospect for petroleum in the Ashburton Country, South Island, New Zealand, between the Rakaia and Rangitata River from the main line of railway to the sea. Oil has been known to shew out in the sea for some years, and good surface indications on land. The following gentlemen constitute the syndicate:—Messrs. A. Macfarlane, R. W. Chapman, G. Humphreys, G. T. Booth, W. Reece, A. Joyce (manager), L. W. Harley (secretary), 161, Hereford Street, Christchurch.

With regard to Taranaki, they propose expending £10,000 in testing the ground. The Bonithon bore (L. Keith, manager and chief driller), is now down some 1,000 feet, and work going on satisfactory. Mr. Keith writes that the business is going slowly in Taranaki, but that several wells have good indications, and that oil is expected to be found in one shortly.

The directors of the Taranaki Petroleum Co. report that wells are progressing favourably, and that when water is finally overcome, and the few feet remaining are drilled, both Nos. 2 and 3 bores should give satisfactory results. This company has tanks and earth reservoirs prepared for expected flow of oil. It has altogether five wells in hand, and also a refinery site.

Mr. McDonald, of the Inglewood Co., has everything on order to start boring at an early date, and the plant imported from America may arrive in the colony any day now.

Mr. Bunger, an experienced Californian driller who has charge of the New Plymouth Petroleum Company's operations, is getting the bore down, being at present in hard sandstone, which is shewing oil. The driller thinks well of the indications so far. The present depth is 600 feet.

The work on the Gisborne coast is practically nil, as no actual drilling has been commenced, though areas of likely country are still being obtained under options.

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THE EXPLOITATION OF THE PETROLIFEROUS
REGIONS OF THE GULF OF GUINEA.

ENGLISH ENERGY.

The activity which several English companies are taking in the petroliferous areas of the Gulf of Guinea may be judged by the remarks of Mr. George Macdonald, of Salisbury House, London, E.C., to a REVIEW representative a day or two ago. Mr. Macdonald, it may be mentioned, about ten years ago, in a book upon "The Gold Coast—Past and Present," spoke of the fact that petroleum had been discovered in the colony, and incidentally remarked that he confidently expected that the country would be found worthy of European capital and enterprise.

More has been done, says Mr. Macdonald, during the past four years to draw attention to the Gulf of Guinea as an oil field than was done in the previous twenty years, but even to-day its possibilities are hardly realised, and what it must mean ultimately for the continent of Africa is very hard to say.

At present four companies are steadily proving the existence of petroleum through the Gulf of Guinea, and they are quietly engaged in opening up what promises to be a second California.

That portion of the Ivory Coast which was once included in the English territory has now again fallen under French rule, but even here it has been left for an English company to undertake the development of the petroleum that undoubtedly exists in that part of Guinea.

Two other English companies are working for oil in Southern Nigeria, and so well do the authorities think of their undertakings and prospects that it has been thought advisable by the Government to introduce specific legislation in that colony in order to protect what promises to be an enormous oil industry in the near future—an industry that, properly handled, will mean a fortune to the British Colony of Nigeria.

Yet another English company is proving the existence of petroleum in the province of Angola, in Portuguese West Africa, and arrangements are being made at the present time for a sound commercial attempt to be made to develop the petroliferous area in the Gold Coast Colony, where the indications were first discovered as far back as 1883.

THE PETROLEUM FIELDS OF INDIA.

In our last issue we referred to the recent survey of the petroleum areas in India by Mr. Pascoe, which has been made. Apart from the details then published, we may mention that the blocks in the Singu field were last year also visited by Mr. Pascoe—visited chiefly with a view of locating the southern boundary of the actual oil-bearing territory. This could not be done with any exactitude, as the field has been little developed hitherto; but in all probability the line should be drawn somewhere within Block 56N. The oil sand in this field, unlike those in either Yenangyaung or Yenangyat, is very constant in depth and thickness, and the yield of a well can be reckoned with more certainty and accuracy. The discovery in one well of a second oil sand below the one hitherto exclusively worked is a point of much interest and importance.

The Yenangyat field, although a continuation of the Singu anticline across the Irrawaddi, is not as promising as it was at first thought to be. Altogether some 260 holes have been drilled here by the Burmah Oil Co., Minbu Oil Co., and Rangoon Oil Co., but the percentage of abandoned bores is as high as 24, that at Yenangyaung being about 15. The country is very hilly, and it is often necessary to construct an elaborate road and to bridge small ravines before an engine and derrick can be erected upon the selected site. Owing to the asymmetry of the flexure, the oil-pools do not lie vertically beneath one another, but recede westwards in the deeper sands. The most suitable distance west of the exposed anticlinal crest for a well site becomes therefore a matter for very careful calculation, and is influenced by the degree of asymmetry of the anticline, by the depth of the oil sand sought after in this particular spot, and by any minor folding or local disturbance of the strata. Frequently a suitable site when selected has to be abandoned on account of topographical difficulties which interfere with the work of exploitation. Although many large wells have been struck in this field, the yield is liable to decline rapidly, and the capabilities of the field generally are far below those of Yenangyaung, in spite of its much greater size. The extreme north of the field has not yet been conclusively tested, but indications are sufficiently favourable to warrant a thorough exploration with the drill.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO SEPTEMBER 9th, 1907.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Aug. 26.	From Jan. 1.	Since Aug. 26.	From Jan. 1.	Since Aug. 26.	From Jan. 1.	Since Aug. 26.	From Jan. 1.	Since Aug. 26.	From Jan. 1.	Since Aug. 26.	From Jan. 1.	Since Aug. 26.	From Jan. 1.	Since Aug. 26.	From Jan. 1.
Austria ...	—	—	—	69,540	—	67,770	—	—	—	—	—	—	—	—	—	137,310
Belgium ...	—	153,410	28,440	472,005	—	—	—	310	—	4,000	—	—	270	860	28,710	630,585
Canada ...	—	—	—	—	—	4,800	—	—	—	—	—	—	—	—	—	4,800
Dutch India.	—	—	—	—	—	—	—	—	1,899,240	18,309,320	—	—	—	—	1,899,240	18,309,320
Germany ...	43,400	1,235,785	19,310	1,053,920	—	2,000	—	—	—	80	—	—	600	4,100	63,310	22,295,885
Holland ...	—	1,070	200	10,670	—	—	—	—	2,600	452,130	—	—	7,240	97,570	10,040	561,440
Roumania ...	—	5,744,090	—	—	—	—	5 159,590	—	—	1,459,000	—	238,700	—	—	—	12,601,380
Russia ...	—	23,262,560	—	2,254,700	—	—	837,040	—	—	11,730	—	—	6,670	1,423,780	6,670	27,839,810
U.S.A. ...	1,863,730	69,019,830	2,284,040	27,954,145	—	579,710	946,690	33,527,980	—	3,456,100	—	4,112,470	20,400	984,690	5,114,860	139,634,925
Other Countries	—	950	1,890	58,145	—	—	—	—	—	2,500	—	40	—	117,790	1,890	179,425
	1,907,130	99,417,695	2,333,880	31,873,125	—	654,280	946,690	39,574,920	1,901,840	23,694,860	—	4,351,210	35,180	2,628,790	7,124,720	202,194,880

AMONG THE CONSULS.

THE PETROLEUM SITUATION IN MEXICO.

Writing with regard to the petroleum situation in Mexico, the English Consul says:—Petroliferous lands extend from the Hacienda of San José de las Ruinas, in Central Tamaulipas, to the district of Valles in San Luis Potosi (where the Ebano oil deposits are being worked) through the counties of Uzuluama, Tuxpam and Papantla in Vera Cruz. Further to the south another region is found which embraces the Vera Cruz counties of Acayucan and Minatitlan, and extends southwards through the States of Tabasco, Campeche, and Chiapas. Petroleum has also been found in small quantities in the Federal district of Mexico, Jalisco and Oaxaca.

The Ebano oil is being used as fuel for locomotives by the Mexican Central Railway. The oil fields in Northern Vera Cruz are not yet being operated commercially, but are being actively developed.

The oil of the field of Southern Vera Cruz, especially that of Minatitlan, is being stored, preparatory to the completion of large refining works, the property of Messrs. S. Pearson and Son, Ltd., of London.

The Minatitlan oil is said to require considerable refining, being very rich in naphtha; it is the intention to use it as fuel for the locomotives of the Tehuantepec National Railway. These locomotives are all oil burners, but the oil is at present imported.

It is also intended to convert the locomotives of the Mexican Railway and of the Vera Cruz and Pacific Railway into oil burners as soon as the Minatitlan refineries are completed. This will cause another decrease in British imports into Mexico. The Mexican Railway now imports its patent fuel and coal for its engines from Wales, but once its locomotives are converted, the importations will cease.

THE OIL TRADE OF CANTON.

Dealing with the oil trade of Canton during 1906, Acting-Consul Sly says that for the year kerosene shewed a decreased net import of 1,129,505 gallons, the total being 13,002,829 gallons. The gross total is 13,881,721 gallons, the difference between which and the net return is to be found in the re-exports to Hong Kong and Chinese ports. In the gross figures American oil appears, according to the Imperial Maritime Customs returns, for 8,323,692 gallons, Sumatran for 5,103,962 gallons, and Borneo for 454,067 gallons. I am given to understand, however, that a very much larger quantity of Borneo oil than is shewn by the above quotation was actually imported, and it would seem, therefore, that this commodity has at times been declared on entry at the Imperial Maritime Customs as Sumatran. The Standard Oil Co. of New York have done a good business during the year under review, and the improvement over 1905 is said to be roughly 100 per cent. Sumatran oil, inclusive of what should be properly classified as the Borneo product, shews a decrease as compared with 1905 of 1,977,492 gallons, and has

suffered from competition with a cheaper kind of American oil, the "Eagle Brand," which finds favour in certain districts. It must, however, be remembered that the import figures are not the only guide to the amount of business done; large stocks may be on hand from the previous year, and importers naturally take advantage of low freights when offering.

IMPORTS INTO FOOCHOW.

According to a Consular report recently issued, American kerosene increased during 1906 from 868,040 gallons, valued at £19,298, in 1905, to 996,700 gallons, valued at £22,965, in 1906; Sumatra oil decreased from 2,200,500 gallons (£39,461) to 1,679,399 gallons (£29,207). Borneo oil was imported to the amount of 200,000 gallons (£3,357). Of the Sumatra oil, 462,121 gallons were imported in bulk; all other oils were imported in tins. The Asiatic Petroleum Co. is the only firm here having tank installations. I am informed that the Standard Oil Co. purpose erecting three tanks at Pagoda Anchorage with a combined capacity of over 2,000,000 gallons.

THE SEQUEL TO AMERICAN GOVERNMENT INTERFERENCE.

Commenting upon the oil trade of Tientsin during 1906, the British Consul says that kerosene from America amounted to 6,832,190 gallons in 1905, but owing to the boycott and the subsequent disfavour of American petroleum this total fell to 5,067,599 gallons during last year. An article so necessary to the Chinese nowadays could not be completely boycotted, but much damage was done to the trade, and preference was given to kerosenes of other origin. The latter being, however, of inferior quality, could not entirely supplant the American oil. Russian oil, owing to the troubles in the Transcaucasian provinces, ceased to come altogether, and the void was filled by the two Asiatic products from Sumatra and Borneo.

The former (chiefly Langkat) has increased with extraordinary rapidity, the import in 1905 being 6,820,927 gallons (£138,237) and *via* Chinwangtao 626,770 gallons, making a total of 7,447,697 gallons, which rose in 1906 to 12,422,579 gallons (£194,906).

Borneo oil has also advanced, the import in 1905 being only 100,000 gallons (£2,522). In 1906 it leapt up to 1,973,824 gallons (£27,238).

In former years almost the whole import was in cases, but during 1906 the deliveries in this form have fallen very rapidly, and the oil has been shipped largely in bulk.

PETROLEUM IMPORTS INTO DAMASCUS.

Russia for several years past enjoyed the monopoly of the supply of petroleum used for lamps in the province of Damascus, but since 1905 Austria-Hungary and the United States have competed with Russia and in 1906 divided with her equally the supply of the 88,000 cases valued at £27,000.

The Petroleum Producing Rocks of Illinois.

The rocks producing oil in South-eastern Illinois belong to the carboniferous system, the district being within the Eastern Interior coal field. This coal field covers an area of 46,000 square miles in Central and Southern Illinois, South-western Indiana and North-western Kentucky. It occupies an elliptical basin with a centre in South-eastern Illinois, toward which the different layers of rocks slope or dip from every direction. At the centre of the basin there is an area of considerable extent within which the strata are nearly horizontal. This lies between the Wabash and Embarras rivers on the East, the Kaskaskia river on the north-east, and the Louisville and Nashville Railway on the south.

The rocks of this basin in Illinois and Indiana are separated by geologists into three great groups or subdivisions—(1) Upper or barren coal measures; (2) Lower coal measures; (3) Mansfield sandstone.

The basal or lowermost one of these groups in that of the Mansfield sandstone or Millstone grit; also known in geological literature as conglomerate sandstone, Pottsville conglomerate, etc. This is a bed of sandstone which, in Eastern Illinois, ranges up to 110 feet in known thickness. It varies greatly in texture, colour and thickness. In places the sandstone is a coarse conglomerate, from which it grades into coarse sandstone by the decrease in the number and size of the pebbles and the corresponding increase in the relative amount of sand. It is in places a massive sandstone, but elsewhere more or less laminated, and in many places shews cross-bedding. Locally it contains many nodular iron masses which are generally hollow. It is not rich in fossils, but sometimes contains fossil coal plants, and locally it contains small coal seams and beds of fire-clay. The colour varies from light grey through buff, yellow, yellow-brown to red. It is more durable than either the underlying or the overlying rocks, and where exposed along its eastern outcrop in Indiana it forms bold cliffs along the water courses.

The Mansfield sandstone marks a period of inflow of the sea. Previous to its deposition, there had been withdrawal of the sea, and erosion had cut numerous valleys to varying depths, while the land had been covered with the products of weathering. The incoming sea gathered up the fragments of rock waste, and filled the depressions of the former land area, thus forming a mantle of sand, gravel, clay and coal, which rests unconformably upon the underlying uneven surface. Under such conditions different deposits would be forming in different parts of the area at the same time. On the advancing shore line there would be in many places quite violent waves which would result in mixed deposits of sand and gravel, more or less inclined to the horizontal in which the characteristic beach structure would shew itself. Out from the beach in deeper water, deposits of fine sand and mud would be formed on which, as the water shallowed, swamps and bogs that later became coal beds would form. At this time such vegetable

deposits were quite limited in both vertical and aerial extent in comparison with those formed in the next succeeding period.

Recently some geologists have been inclined to assign the origin of more or less of the conglomerate and sandstone to the action of streams bearing sand and gravel from distant uplands and depositing them on the low ground of the basins in which the formation is found. Not improbably the land streams and the sea co-operated in the process.

In South-eastern Illinois the Mansfield sandstone lies from 800 to 1,100 feet below the surface, with many impervious shales above. Being often coarsely granular and therefore very porous, it furnishes a typical storage reservoir, wherein petroleum, salt water or other fluids may be retained.

Above the Mansfield sandstone are the rocks of the lower or productive coal measures, which consist of alternating beds of shale, sandstone, clay and limestone, with occasional beds of compressed vegetation in the form of coal. During the carboniferous period, when the coal and its accompanying shales and sandstones were in process of formation, the area now comprised in the Eastern Interior coal field was a great basin or flat but little above the level of the sea, and surrounded on every side except the south-western, by the higher lands of the older formations. By successive alterations of level, ranging through thousands of years, this basin became at times an arm of the south-western sea, again a fresh-water lake, and then for a period a vast swamp or marsh. When high enough to form a marsh, vegetation sprang up from the ooze and mud at the bottom and flourished for centuries—the newer growths springing from between the fallen masses of the older, as in the peat bogs of to-day, and so formed a mighty mass of carbonaceous material.

The marsh was at times covered by sheets of fresh water, into which rivers from the surrounding highlands flowed, bearing with them millions of tons of clayey sediment and sand, the remains of the older decayed rocks. This sediment was spread out over the mass of submerged vegetation, and by protecting it from complete decomposition and by compressing it, aided in its conversion into the hard, mineral coal. The clayey sediment itself was in time hardened into vast beds of shale and the sand into sandstone. Where fresh-water shales and other forms of lime secretions were sufficiently abundant, limestone was formed. At some times and in some places the sea covered the basin and brought in marine forms of life, forming marine limestones as well as marine shales and sandstones, but none of the limestones cover an extensive area or are of great thickness.

After each submergence, with the resulting formation of shale, sandstone or limestone, an emergence followed. The floor of the basin was brought to the surface or so near the surface that the vegetation for a new coal

seam could spring up, and the processes detailed above were again undergone.

The thickness and composition of the different beds of shale and sandstone were determined almost wholly by the character and source of those streams of water which flowed into the old basin in which the shales were formed. If the stream was a large one and flowed for a long time with sufficient velocity, to carry sediment far out into the deeper part of the basin, the bed of shale or sandstone is thick, covers a large area, and is comparatively uniform throughout. On the other hand, if the stream was small and flowed slowly, the shale or sandstone bed is correspondingly thin, of small extent, and more apt to be varied in its composition. The kinds of rocks over which these ancient rivers flowed on their way to the basin determined the constituents of the sediments they brought down, and therefore the character and composition of the shales and sandstones into which this sediment was afterward formed.

It must also be remembered that most coal seams, as well as strata associated with them, are necessarily more local in their occurrence than are thicker strata of purely marine origin. Conditions are more uniform over the sea bottom than over a land area, especially a swamp area, such as that of the old basin of the carboniferous coal fields. As this area was subject to many periods of emergence and submergence during the accumulation of the carbonaceous deposits that form the coal beds, there would from necessity be many swamp, lake, sea and land areas. While it is possible that a vegetal swamp might have extended over the entire Indiana-Illinois coal field, it is much more probable that over such a large area so near sea-level, there would be portions of the area under water too deep for vegetation to grow, and other portions so far above the water that no vegetation might accumulate. Hence, the coal might form either in separated basins or in one large basin, with many barren spots, where the upland areas and the deeper water areas were at the time. It should be kept in mind that many coal seams and their accompanying shales and sandstones cover only a few acres, or a few hundred acres, while others may extend over hundreds or even thousands of square miles.

Any one of the limestones or the sandstones of the lower coal measures may, in certain restricted areas, be porous enough to serve as a reservoir for the storage of petroleum, and may be petroleum-bearing, provided the necessary conditions of accumulation and preservation of oil in commercial quantities be present. These conditions will be hereafter treated.

Above the rocks of the productive coal measures, last described, are those of the barren coal measures, which include six or seven thin beds of coal alternating with shales, sandstones and limestones, as in the productive measures. These barren coal measures attain in Illinois a thickness of 700 feet, and any one of the sandstones and limestones present may be productive of petroleum, provided the conditions are favourable for the accumulation and preservation of oil.

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PROCESS OF PRODUCING TAR OIL EMULSIONS.

An English patent has recently been granted to Wilhelm Wildenhayn, of 52, Frankfurterstr., Giessen, Germany, for a process dealing with the production of tar oil emulsions.

The object of the invention is to produce an impregnating liquid from tar oil for creosoting purposes which makes it possible to saturate the cells of wood with a proportionately small quantity of tar oil, and to attain nevertheless the same effect as with the impregnating processes now in use.

It has already been proposed to produce tar oil emulsion by dissolving oil in resinester-sulphate of alkali, and to produce a tar oil emulsion entirely or mainly by means of ammonia, or a sufficient quantity of ammoniacal salts as a saponifying medium.

In the invention there is also made use of an emulsion which, however, contains neither alkali nor ammonia, and in which are contained the substances won in the purification of benzol with sulphuric acid of 60 degrees. there is produced a grease, the colour of which varies between brown and violet, and which, according to Kramer, is said to be composed of xylyl-phenylmethane, cyclopentadiene and other hydrocarbons not yet identified. This is now mixed with tar oil and forms soon after the addition of water an emulsion which remains constant, even when exposed to heat, and which is particularly suited for the impregnation of wood, as besides the tar oil also the sulphuric acids contained in the mixtures act as germ destroyers.

As the excess of sulphuric acid is bound by the bases contained in the oil, free acid is found in the mixture only in very small quantities, which is shewn by the fact that the waste acid will no longer resinify the tar oils, and that the substances brought into contact with the emulsion, and which react on free sulphuric acid, remain unchanged. But small residues of acid, which may still remain, will have no injurious effect on the wood fibre, as the emulsion is used greatly diluted with water.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended August 31st, was 268,000 poods, or 4,320 tons; and for the week ended September 7th was 264,000 poods, or 4,256 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended August 31st was 211,000 poods, or 3,401 tons; and for the week ended September 8th was 209,000 poods, or 3,370 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 1st September was 137,410 poods, or 2,216 tons; and for the week ended 8th September, 150,785 poods, or 2,432 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 1st September was 123,779 poods, or 1,996 tons; and for the week ended 8th September was 119,883 poods, or 1,933 tons.

The American Oil Market.

New York, Week ended August 31st.

Reports from the South-west fields recently have, on the whole, says the *Oil, Paint and Drug Reporter*, been of a more discouraging character, the production shewing a decline in nearly all districts. This condition is particularly true of what has lately been the most promising field, the Congo pool, in Hancock county, West Virginia. Late completions have been very light producers. Tests outside of defined limits have almost without exception yielded disappointing results. There is now little hope for new production in the district. In other fields of the Pennsylvania classification operators are keenly pushing the search for virgin territory. Lincoln county, West Virginia, promises to be the scene of considerable activity before winter impedes work. Second tests and deep-sand operations in the same State have been attended chiefly with unimportant results, but the Battelle district of Monongalia county furnished a notable exception in a well that was credited with 85 barrels the first 24 hours after the fourth sand had been reached. Fair gassers have also been encountered, Lewis county furnishing one that was reported good for 4,000,000 feet in the fifth sand. What was considered as a promising strike has been reported near Independence, Washington county, Pa. The most favourable news from the south-eastern fields of Ohio has been a show for a 75-barrel producer in Monroe county. The runs of the principal operating company in the Mid-Continent fields during the first twenty-one days of the month were the heaviest on record, aggregating 2,298,498½ barrels, or a daily average of 109,452 barrels. The deliveries totalled 1,499,375 barrels. The most important news of developments in the Gulf coast fields is the report of another good producer in the southern extension of the Jennings (La.) field, which was credited with a daily record of 2,000@5,000 barrels with the aid of compressed air.

REFINED AND PRODUCTS.—The local movement in refined has been of steadily increasing proportions, but there is still considerable chance for improvement. In the city trade the installation of twenty-five cent gas slot machines in the districts where lamps have continued in vogue has effected the sale of illuminating oils materially. Clearances to foreign ports during the week have been of greater dimensions, the total from New York being 13,303,885 gallons, and from Philadelphia 7,574,760 gallons, against 8,057,750 and 4,506,850 gallons respectively, during the previous week. The engagements of 135,000 cases for September shipment to Shanghai, New York or Philadelphia loading and of 40,000 cases to Havana, Philadelphia loading, have been reported. Prices have undergone no quotable change, the tendency of the market being one of maintained firmness. Foreign advices to the *Reporter* indicate a further advance on the Baku market except for residuals. Small labour troubles have been reported and rumours were current that a general strike was contemplated. The high price of Russian kerosene renders exports to the Far East of very small dimensions. Steady and unchanged markets for American and Russian oils in London and Liverpool are noted. No price alterations have been recorded in the Indian, Shanghai or Yokohama markets. Freight rates to the various foreign markets continue firm, and an advance to 21½c. is noted to Shanghai.

The same activity characterises the local demand for the products, especially for gas engine consumption and available supplies are readily absorbed. Exports of naphtha during the week shewed a falling off, the total being 95,290 gallons, against 202,680 gallons during the previous week. A report was current of a further decline of 1c. in auto-naphtha and store gasoline, but this proved to be without foundation, the same quotations prevailing throughout.

CLOSING QUOTATIONS

	CRUDE.	Week ended	
		Aug. 24. 1907.	Aug. 31. 1907.
Pennsylvania crude in bbls.	\$8.20	\$8.20
Pennsylvania crude in bulk	4.75	4.75
Residuum, bbls. for export	6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Aug. 31. 1906.	Aug. 31. 1907.
Tiona .. ..	.. ..	1.74	1.78
Pennsylvania .. ..	.. ..	1.64	1.78
North Lima .. ..	.. ..	0.98	0.94
South Lima .. ..	.. ..	0.93	0.89
Indiana .. ..	.. ..	0.93	0.89
CANADIAN OIL:			
Petrolia .. ..	.. ..	1.37	1.34

REFINED—FOR EXPORT.

		Week ended	
		Aug. 31.	
		S.W.	W.W.
Barrels, cargo	per gal.	\$8.45	@10.45
Philadelphia .. ..	.. ..	8.40	@10.40
Bulk, New York .. ..	.. ..	5.00	@7.00
Bulk, Philadelphia .. ..	.. ..	4.95	@6.95
Cases, New York .. ..	.. ..	10.90	@13.90
Cases, Philadelphia .. ..	.. ..	10.85	@13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Aug. 24. 1907.	Aug. 31. 1907.
3,000 to 10,000.. ..	.. ..	10.80	10.80
1,000 to 3,000.. ..	.. ..	10.85	10.85

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Aug. 24.	Aug. 31.
120 fire test, S.W. ..	in barrels	12	12
130 fire test, S.W. ..	.. ..	12½	12½
150 fire test, W.W. ..	.. ..	13½	13½
In bulk from tanks ..	.. ..	10	10
300 fire test .. ..	.. ..	13½@14	13½@14

NAPHTHA AND GASOLENE.

		Week ended	
		Aug. 24.	Aug. 31.
Naphtha, crude, car. lots, 68 @ 72 deg.	.. ..	16.00	16.00
Gasolene, 86 deg... ..	.. ..	24.00	24.00

PENNSYLVANIAN OIL RUNS from Aug 21st to Aug. 26th were:—Aug 21st, 173,163; Aug. 22nd, 157,282; Aug. 23rd and 24th, 141,634; Aug. 25th, 143,913; Aug. 26th, 240,772. For the month of July, 2,967,678.

THE DELIVERIES OF PENNSYLVANIA OIL from Aug. 21st to Aug. 27th were:—Aug. 21st, 176,627; Aug. 22nd, 160,819; Aug. 23rd, 181,182; Aug. 24th and 25th, 352,163; Aug. 26th, 190,894; and Aug. 27th, 186,170. For the month of July, 5,281,645.

CLEARANCES FOR THE WEEK.

During the week ended Aug. 30th, and since Jan. 1 the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.	Year.	1906.
Refined	13,303,885	311,926,445	302,904,444	
Crude	—	1,433,925	232,900	
Naphtha	95,290	6,480,820	13,254,449	
Residuum	—	416,827	3,612,000	

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

		Gallons.
From New York, week ended Aug. 30th ..	..	17,738,513
Total from New York, from Jan. 1st, 1907 ..	..	467,421,514
Same period last year .. ..	..	404,788,827
Increase .. ..	..	62,632,687
From United States, week ended Aug. 30th ..	..	30,566,313
Total from United States, since Jan. 1st, 1907	827,701,421
Same period last year	783,579,560
Increase	43,121,859

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The "Review" Shipping List.

SEPTEMBER 13, 1907.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Selzaete	Smyrna	At Malta, Sept. 4-5 L. Aug. 17	ENERGIE	Philadelphia	Danzig	L. Sept. 6
ALICE ISABELLE..	Sables d'Olonne	Philadelphia		ERIVAN	Batoum	Liverpool & Manchester	At Liverpool, Sept. 10
ALEMBIC	New York ..	Sydney(C.B.)	L. Aug. 8	ETELKA	Antwerp....	Batoum	L. Aug. 31
AMERICAN	Antwerp	New York ..	P. Nantucket, Sept. 11	EUPLECTELA	Philadelphia	Hamburg ..	Arr. Aug. 18
APPALACHEE	San Francisco	Calcutta	Arr. Aug. 23	EXCELSIOR	New York ..	Rotterdam ..	Arr. Aug. 26
APSCHERON.....	Antwerp	Batoum	P. Beachy Head, Aug. 28	EZIO	—	—	Coasting Peru
ARAL.....	Philadelphia	—	P. Butt of Lewis, Sept. 8	FRANCE MARIE..	Philadelphia	Marseilles ..	Arr. Sept. 9
ARAS.....	Philadelphia	London	Arr. Sept. 10	GEESTEMUNDE..	Tyne	Philadelphia	P. Dunnet Head, Sept. 4
ARGYLL	—	—	Coasting U.S. (Pacific)	GENESSE	London	Manchester	At Liverpool, Sept. 10
ASHTABULA	San Francisco	Shanghai ..	Arr. Sept. 5	GEORGIAN	Tyne	Philadelphia	L. Aug. 28
ASTRAKHAN.....	Hamburg and Tyne	Philadelphia	P. Butt of Lewis, Sept. 1	PRINCE GOLDMOUTH	East Indies	—	P. Perim, Sept. 7
ATLAS	—	—	Coasting U.S. (Pacific)	GUTHEIL	Stettin & Tyne	New York ..	P. Dunnet Head, Sept. 1
AUGUSTA	Philadelphia	Liverpool ..	P. Del. Break., Aug. 27	HAINAUT	Antwerp	Constant'ple	Arr. Sept. 5
AUGUST KORFF..	Manchester..	Philadelphia	P. O. Hd. Kinsale Sept. 11	HARRY	Rouen	Middlesbro'	Arr. Aug. 20
AUREOLE	Lisbon	Philadelphia	Arr. Aug. 31	WADSWORTH	—	—	—
AZOV.....	—	—	Trading on W.C. of South Amca.	HELOIS.....	Philadelphia	Bremerhaven	Arr. Sept. 8
BAKU STANDARD	Tyne	Ibrail	L. Constant'ple, Sept. 5	HERMIONE	Rouen	Tyne	L. Aug. 29
BALAKANI.....	Cardiff	Philadelphia	L. Sept. 1	HOTHAM	Swansea	Philadelphia	Arr. Sept. 2
BATOUM	Kobe	Palembang..	L. July 28	NEWTON	—	—	—
BAYONNE	Venice.....	New York ..	Arr. Aug. 28	HOUSATONIC	Savona	Kustendje ..	L. Sept. 3
BEACON LIGHT..	Rotterdam ..	Philadelphia	P. Lizard, Sept. 11	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BEME	Rangoon....	Kurrachee ..	L. Sept. 2	JOANNIS COUTZIS	Batoum	Dunkirk	P. Constant'ple, Aug. 27
BLOOMFIELD	Rotterdam ..	Tyne	Arr. Aug. 9	J.B.AUG.KESSLER	Bombay	Singapore ..	Arr. Aug. 29
BORJOM	Batoum	Alexandria ..	L. Constant'ple, Aug. 31	JAMES BRAND	London	Philadelphia	Arr. Aug. 31
BRILLIANT	Philadelphia	Copenhagen	P. Dunnet Head, Sept. 8	JULES HENRI	Marseilles ..	Philadelphia	P. Tarifa, Sept. 6
BROADMAYNE	Philadelphia	Rouen	P. Del. Break., Aug. 31	KURA	Batoum	Amsterdam..	P. Constant'ple, Sept. 5
BULLMOUTH	Shanghai ..	Balekpappan	L. July 29	LA CAMPINE.....	Antwerp	Tyne	L. Sept. 10
BULYSESSE	Kurrachee ..	Aroe Bay ..	L. Aug. 11	LA FLANDRE	New York ..	Antwerp	Arr. Sept. 10
BURGERMEISTER	New York ..	Swinemunde	L. Aug. 29	LA HESBAYE.....	Kustendje ..	—	P. Gibraltar, Sept. 10
PETERSEN	—	—	—	LA MADELEINE ..	Algiers	Brest	Arr. June 16
CALCUTTA.....	Shanghai ..	San Francisco	L. Aug. 26	LA VIGUESA.....	Vigo.....	Philadelphia	L. July 19
CAPTAIN A. F.	Port Arthur	New York ..	L. Aug. 24	LACKAWANNA....	Barrow	Philadelphia	Arr. Aug. 30
LUCAS	(Texas)	—	—	LANSING.....	—	—	At San Francisco, Aug. 6
CARDIUM	Kustendje ..	—	At Port Said, Sept. 10-11	LE COQ.....	Bilbao.....	Kustendje ..	Arr. Sept. 7
CATANIA	Astoria	San Francisco	Arr. Aug. 28	LOUTSCH	Batoum	Odessa	L. Aug. 14
CAUCASIAN	Batoum	Antwerp	P. Sagres, Sept. 9	LUCERNA	Tyne	Philadelphia	Arr. Aug. 31
CHARLOIS	Amsterdam..	Philadelphia	P. Dungeness, Sept. 5	LUCILINE	Blaye	Philadelphia	Arr. Sept. 11
CHESAPEAKE	Philadelphia	Calcutta	P. Del. Break, Sept. 2	LUMEN.....	Tyne	Philadelphia	P. Dunnet Head, Sept. 2
CHESTER	Philadelphia	Antwerp	P. Del. Break, Sept. 2	LUX	Rouen	Philadelphia	L. Sept. 7
CIRCASIAN	Talara.....	Callao	L. Salaverry, Aug. 6	MANHATTAN	Philadelphia	Messina	At Messina, Sept. 5
PRINCE	—	—	—	MANNHEIM	Stettin.....	New York ..	Arr. Sept. 9
CLAM	Madras	Balekpappan	L. Sept. 1	MARGARETHA ..	Rio Grande	Montevideo .	Arr. Sept. 8
COL. E. L. DRAKE	Astoria	San Francisco	L. Aug. 28	MAVERICK.....	San Francisco	Seattle.....	L. Aug. 27
COWRIE	Kustendje ..	Bordeaux ..	L. Sept. 9	METEOR	Singapore ..	St. Cath'rine's Point	L. St. Vincent (C.V.), Sept. 5
CUYAHOGA	Philadelphia	Liverpool ..	P. Del. Break, Aug. 30	MEXICAN PRINCE	Novorossisk	Hamburg ..	L. Constant'ple, Sept. 5
CYMBELINE	Batoum	London	L. Constant'ple, Sept. 6	MIRA	Port Talbot	Philadelphia	P. Fastnet, Aug. 28
CZAR NICOLAI II.	Hamburg ..	Batoum	P. Gibraltar, Sept. 7-8	MUREX.....	Balekpappan	Singapore ..	L. July 13
DAGHESTAN.....	Batoum	Genoa	P. Constant'ple, Sept. 9	NARRAGANSETT..	London	Tyne	Arr. Aug. 4
DAKOTAH	Hong Kong	San Francisco	Arr. Aug. 30	NERITE	—	—	Tr. in China Seas
DELAWARE	Avonmouth..	New York ..	P. Barry Island, Sept. 3	NEW YORK	New York ..	Southampton	L. Sept. 7
DEUTSCHLAND ..	New York ..	Amsterdam..	L. Sept. 1	OCEAN	Rotterdam ..	New York ..	P. Scilly, Sept. 7
DIAMANT	Tyne	Philadelphia	Arr. Sept. 6	OILFIELD	Philadelphia	Rouen	Arr. Sept. 9
EDWARD	Batoum	Hull	L. Constant'ple, Aug. 30	ORANJE PRINCE..	Banes	Flushing....	Arr. Sept. 4
DAWSON	—	—	—	ORIFLAMME	Novorossisk	Rouen	Arr. Sept. 9
ELAX.....	Singapore ..	Europe	P. Malta, Sept. 5-6	OSCEOLA	Belize	Bluefields ..	L. Aug. 17
ELSIE MARIE	Philadelphia	Malmo	P. Helsingborg, Sept. 9	OTTAWA	London	Tyne	Arr. Aug. 4
				OURAL	Tyne	—	P. Dover, Sept. 9
				PALEMBANG	Balekpappan	Colombo....	L. July 25
				PAULA	Philadelphia	Oxelosund ..	L. Sept. 9
				PECTAN	Port Arthur (Texas)	Dover	L. Newport News Aug. 31
				PENNOIL.....	Amsterdam..	Philadelphia	Arr. Sept. 11
				PERLAK	Calcutta	Madras	Arr. Aug. 20
				PHOEBUS	New York ..	Hamburg ..	L. Sept. 5

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PINNA	Antwerp	San Francisco	Arr. Aug. 20	STANDARD	Tyne	Philadelphia	P. Butt of Lewis, Aug. 30
POTOMAC	Avonmouth	Batoum	P. Constant'ple, Sept. 2	STROMBUS	Barrow	Cardiff	Arr. Sept. 2
PROMETHEUS....	New York ..	Rotterdam ..	L. Sept. 7	SURAM.....	Port Arthur (Texas)	London	L. Newport News Sept. 4
PRUDENTIA	—	Singapore ..	Arr. Aug. 26	SUWANEE	Sabine Pass	Hull	Arr. Sept 9
QUEVILLY	Rouen and Havre	Philadelphia	L. Havre, Aug. 4	SVIET	Plymouth ..	Batoum	L. Constant'ple, Aug. 27
RION.....	Philadelphia	London	P. Del. Break., Aug. 31	TELENA	London	—	At Colombo, Sept. 2
ROCK LIGHT	Cardiff	Port Arthur (Texas)	Arr. Aug. 29	TEREK.....	Hamburg ..	Philadelphia	P. Lizard, Sept. 10
ROMANY.....	London	Aroe Bay ..	Arr. Aug. 26	TIFLIS	Batoum	Hamburg ..	L. Constant'ple, Sept. 5
ROSSIJA	Archangel ..	London	L. Aug. 30	TIOGA	Emden.....	Galveston ..	Off the Wight, Sept. 7
ROTTERDAM	Santos & Port Natal	Calcutta	L. Port Natal, Sept. 5	TONAWANDA	Muroran	—	L. Aug. 21
RUSSIAN PRINCE	Philadelphia	Tampico....	P. Reedy Island, Aug. 28	TROCAS	Soesoe.....	Sydney	Arr. Sept. 3
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	TURBO.....	Kustendje ..	—	P. Sagres, Sept. 6
SAN CRISTOBAL..	Antwerp	Tyne	L. Sept. 11	TUSCARORA	New York ..	London	L. Sept. 1
SAN IGNACIO DE LOYOLA	Pasages	Philadelphia	L. July 9	TWINGONE	Rangoon ..	Cocanada ..	Arr. Aug. 19
SAXOLEINE	Philadelphia	Blaye	P. Del. Break, Sept. 1	VEDRA.....	—	Hiogo	Arr. prev. Sept. 5
SEMINOLE.....	San Francisco	Calcutta	Arr. Aug. 14	VILLE DE DIEPPE	Havre	Passage West	Arr. July 29 (For repairs.)
SINGU	—	—	Tr. in East Indies	VOLUTE	Palembang..	Singapore ..	L. July 20
SNOWFLAKE.....	Philadelphia	Liverpool ..	Arr. Sept. 19	WASHINGTON....	New York ..	Venice.....	P. Sagres, Sept. 6
SPONDILUS	Pulo Samboe	Rotterdam ..	Arr. Sept. 4	WILLKOMMEN....	Danzig	Hamburg ..	Arr. Sept. 10
				WINNEBAGO	San Francisco	Hong Kong..	Arr. Aug. 28

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

September 13th, 1907.

Refined Petroleum is unchanged as follows :—Russian, Spot 6d. ; American, Spot 6½d.-6¾d. ; Water White, 7½d.-7¾d. ; Roumanian, 6¼d.

LUBRICATING OILS.

There are no alterations, prices remaining :—

- American pale, £7 7s. 6d. to £11.
- American dark cylinder, from £8 10s.
- American filtered cylinder, from £11 2s. 6d.
- Shellene, £5.
- No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine has been falling in price daily since our last report, and is now quoted for Spot 37s. 9d. ; October to December, 38s. 6d. ; January to April, 39s. 9d.

LIVERPOOL OIL MARKET.

September 12th.

Refined oils are quiet, and sellers quote 6½d. for Russian, Galician or Roumanian ; and 6¾d. to 7¾d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0½d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, September 12th.

Refined, in cases, is steady at 10.90 ; Standard White, 8.45 ; Credit balances, 1.78c.

PHILADELPHIA, September 12th.

Standard White is still quoted at 8.40.

RUSSIA.

BAKU, September 9th.

The Baku oil market is firm. Light crude oil, spot, 31¾-32¼ copecs per pood ; residuals, in ships, 31 copecs ; kerosene, in ships, 43½-44 copecs.

BELGIUM.

ANTWERP, September 9th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, September 7th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre ; spirit, 34.25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, September 9th.

The kerosene market is firm. The price of American Standard White is 7.25 marks per 50 kilos, Russian, 7.00 marks.

ROUMANIA.

September 10th.

Crude oil from different fields, including	Francs.
pipe line charges, per 100 kgs.	... 4.10-4.20
Refined oil, exclusive of taxes	... 8.00- —
Motor benzine, including taxes	... 23.00-24.00
Benzine, doubly refined	... 25.00-26.00
Residuals in tank waggons, at refinery	... 3.60-3.70
Paraffin	... 120.00-125.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.00- —
Benzine, sp. gr. 0.710-0.715	... 23.00-24.00
„ sp. gr. 0.715-0.720	... 22.00-23.00
„ sp. gr. 0.730-0.740	... 15.00-16.00
„ sp. gr. 0.745-0.755	... 11.00-12.00

INDIA.

BOMBAY, August 20th.

Market strong.

Standard Oil Co., of New York.

Current rates are :—

American, "Snowflake," 150 deg.	.. ..	Rs. 6 0 2
„ Chester, 125 deg.	.. ..	4 8 2
„ Monkey Brand, 125 deg.	.. ..	4 2 2
„ Bulk, 125 deg. (in local made tins).	.. ..	3 11 0
„ 125 deg. (8 Imperial gallons)	.. ..	3 1 0
„ "White Camelia" brand, 125 deg.	.. ..	No stock.

The Asiatic Petroleum Company, Limited.

Current rates are :—

Burmah oil, in tins, per pair	.. ..	3 7 0
Sumatra "Rising Sun," bulk, per unit	.. ..	3 1 0
„ tins, per pair	3 11 0
Silverlight cases, per case	5 2 0
Sumatra, "Anchor" per case	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for .
this Journal by . . .
the Custom House.

FOR THE WEEK ENDED 2ND SEPTEMBER, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
Aug.	LONDON—			
27	G. W. Sheldon and Co. ..	L.Comp.	1,600	New York
27	Fielder, Hickman and Co...	Lub.	7,800	"
27	Goodall and Co. ..	Crude	2,080	St.Petersbrg.
28	Union Lighterage Co. ..	M.Colza	1,200	Philadel.
28	" ..	Lub.	1,350	"
28	London and India Docks Co.	"	2,480	Hamburg
28	Union Lighterage Co. ..	"	50	Bremen
29	T. H. Lee ..	Lub. Gr.	40	Hamburg
29	Bowring Petroleum Co. ..	Lub.	970	Lisbon
29	Anglo-American Oil Co. ..	"	40,200	Philadel.
29	" ..	"	16,600	New York
29	London and India Docks Co.	"	5,240	"
30	Asiatic Petroleum Co. Benzine		1,569,220	Pulo Bukum
	(Spondilus)			
30	" ..	"	330,020	Soesoe
30	London and India Dock Co.	Lub.	400	New York
31	O. Gerdes Hansen and Co...	"	50	Philadel.
31	Mordaunt Bros. ..	Lamp	9,400	Hamburg
Sept.				
2	Burt, Boulton and Heywood	Naph.	2,600	Terneuzen
2	G. W. Sheldon and Co. ...	Lub. Gr.	400	New York
Aug.	LIVERPOOL—			
27	C. C. Wakefield and Co. ..	Lub.Gr.	80	Antwerp
27	J. T. Fletcher and Co. ..	"	80	"
27	W. B. Dick and Co... ..	Lub.	1,840	New York
27	George B. Taylor ..	"	47,680	"
27	" ..	"	520	"
28	Midland Railway ..	"	910	Philadel.
28	Bowring Petroleum Co. ..	"	1,280	"
29	Meade-King, Robinson & Co.	"	27,400	"
29	Worthington and Boler ..	"	1,000	"
29	Vacuum Oil Co. ..	Lub.Gr.	20,000	"
30	W. B. Dick and Co. ..	Lub.	6,100	"
30	Crew, Levick and Co. ..	"	3,390	"
30	Vacuum Oil Co. ..	Lub.Gr.	5,000	Portland(M.)
30	A. Hopps and Sons..	Lub.	5,020	Baltimore
31	Meade-King, Robinson & Co.	"	4,800	"
31	Vacuum Oil Co. ..	"	2,800	Philadel.
31	King, Baillie and Co. ..	"	60	New York
31	George B. Taylor ..	"	95,480	"
Sept.				
2	W. B. Dick and Co. ..	"	12,200	"
2	Anglo-American Oil Co. ..	"	790,780	Philadel.
	(August Korff)			
Aug.	BRISTOL—			
30	Anglo-American Oil Co. (Delaware)	Lamp	536,900	New York
	GOOLE—			
27	Lanc. and York. Ry. Co. ..	Lub.	600	Antwerp
	GRIMSBY—			
27	J. Sutcliffe and Son ..	"	320	Hamburg
27	" ..	"	360	Antwerp
27	" ..	"	40	"

DATE	PORT AND IMPORTERS	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
	HULL—			
29	W. Gilyott and Co. ..	Lub.	164,000	New York
29	Wilsons and N.E. Railway Shipping Co.	"	4,760	"
29	" ..	"	6,410	Antwerp
	MANCHESTER—			
29	D. Currie and Co. ..	Lub.Gr.	120	Hamburg
29	Geo. B. Taylor ..	Lub.	80	"
29	Lamport and Holt ..	"	1,260	New York
29	W. Hodgson and Co. ..	"	3,920	"
29	Diamond Lubricating Co..	"	2,400	"
29	D. Baxter and Sons..	"	50	"
29	Geo. Fairclough ..	"	480	"
29	G. B. Taylor..	"	116,360	"
29	" ..	"	105,200	Philadel.
29	Meade-King, Robinson & Co.	"	22,600	"
29	Worthington and Boler ..	"	1,480	"
30	Liverpool Storage Co. ..	"	17,040	"
30	Crew, Levick, and Co. ..	"	17,820	"
30	" ..	M.Colza	9,210	"
	NEWCASTLE—			
27	Tyne-Tees S.S. Co. ..	Lub.	200	Rotterdam
27	" ..	"	1,080	Hamburg
27	Hoyle, Robson, Barrett & Co.	Tar Oil	600	Archangel
27	P. H. Matthiessen and Co.	Lub.	200	Bergen
29	Furness, Withy and Co. ..	"	2,400	New York
	DUNDEE—			
29	D. Alexander and Sons ..	Crude	200	Hamburg
29	A. B. Fleming and Co. ..	Lub.	3,990	Riga
	GLASGOW—			
29	Anchor Line ..	"	81,590	New York
	GRANGEMOUTH—			
29	W. Graham-Yooll and Co...	Lamp	1,680	Hamburg
29	" ..	"	3,360	"
29	J. Currie and Co. ..	L.Paste	940	"
29	" ..	Lub.	2,000	"
	LEITH—			
27	J. Currie and Co. ..	"	100	"
29	W. Graham-Yooll and Co ..	Lamp	3,130	"
	Total for Week ..		4,131,000	

FOR THE WEEK ENDED 9TH SEPTEMBER, 1907—

Sept.	LONDON—			
3	Mordaunt Bros. ..	Lub.	8,530	New York
3	Fielder, Hickman and Co...	"	19,040	"
3	Anglo-American Oil Co. ..	"	72,080	"
3	Bowring Petroleum Co. ..	"	9,400	Philadel.
3	A. Brown and Co. ..	"	2,400	"
3	Lubricating & Fuel Oils, Ltd.	"	20,500	"
3	R. Park and Co. ..	"	520	Marseilles
4	London & India Docks Co..	"	1,100	Hamburg

MIDLAND RY-CARRIAGE & WAGON CO., LTD.,

Midland Works,
BIRMINGHAM.

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Manufacturers, Motorists, Railway and
Motor Bus Companies.    

IN USE AND FOR SALE EVERYWHERE.

== QUALITY TELLS. ==

To Dealers only.

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.	DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Sept.					Sept.				
4	T. H. Lee	Lub.	50	Hamburg	3	J. Sutcliffe and Sons ..	Lub.	160	Antwerp
4	"	"	100	"	5	"	"	120	"
4	Worthington and Boler ..	"	2,600	Philadel.	6	"	"	480	"
4	G. and H. Green	"	4,190	New York		HULL—			
5	C. Price and Co.	"	550	Hamburg	3	Hull and Neth. S.S. Co. ..	Tar Oil	1,600	Rotterdam
5	F. Randall	"	4,250	Philadel.	3	"	"	1,640	"
5	Ragosine and Co.	"	2,550	"	5	"	"	1,600	"
5	Worthington and Boler ..	"	2,000	"	5	Wilsons and N.E. Railway	Lub.	380	Hamburg
5	Ocean Oil Co.	"	4,800	"		Shipping Co.			
5	Juett and Cain	"	4,000	"	5	"	"	160	Antwerp
6	Lubricating & Fuel Oils, Ld.	"	16,400	"	5	"	"	280	"
6	"	"	8,200	Antwerp	5	"	"	4,360	"
6	Page, Son and East	"	120	"	5	"	"	200	Christiana
6	J. Spurling	"	540	New York	5	"	"	28,080	New York
6	"	Lub. Gr.	250	"	7	W. Gilyott and Co.	"	13,320	"
6	Anglo-American Oil Co. (Genesee)	Gas	946,690	Sabine	9	Hull & Netherlands S.S. Co.	Tar Oil	2,400	Rotterdam
6	J. and R. Grant	Hydro-carbon	270	Brussels		MANCHESTER—			
7	John Cockerill Line	Lub. Gr.	100	Ostend	20/8	J. T. Fletcher and Co. ..	Lub.	250	Antwerp
7	T. H. Lee	Lub.	840	Hamburg	5	"	"	220	"
7	"	Lub. Gr.	500	"	5	Pickford's	"	70	Hamburg
7	Argo Steamship Co.	Lub.	320	Bremen	5	Geo. B. Taylor	"	120	"
7	British Pet. Co. (Aras) ..	Lamp	1,298,000	Philadel.		MIDDLESBRO'—			
9	Anglo-American Oil Co. ..	Lub.	13,400	"	3	E. Harris and Co.	"	2,400	Antwerp
9	Produce Brokers' Co.	"	14,400	"		NEWCASTLE—			
9	G. W. Sheldon and Co. ..	Lub. Gr.	490	New York	5	Tyne-Tees Steamship Co. ..	"	520	Hamburg
9	Mordaunt Bros.	Lub.	8,000	"	5	"	"	40	Antwerp
	LIVERPOOL—				7	Furness, Withy and Co. ..	"	37,160	New York
3	Burnaby and Chantrell ..	L. Comp.	980	"		SOUTHAMPTON—			
3	Worthington and Boler ..	Lub.	960	Philadel.	5	American Line	"	400	"
3	Meade-King, Robinson & Co.	Lub. Gr.	480	Hamburg		SWANSEA—			
5	C. C. Wakefield	"	170	Antwerp	6	Burgess and Co.	L. Paste	230	Hamburg
5	Stockdale and Doel	Lub.	5,350	Boston		GLASGOW—			
5	Geo. B. Taylor	"	4,400	New York	3	Donaldson Bros.	Lub.	2,400	Baltimore
5	A. Hopps and Sons	Lamp	20,680	Philadel.	3	Anchor Line	"	66,250	New York
5	Crew, Levick and Co.	Lub.	11,740	"	3	J. and A. Allan	"	51,300	Philadel.
5	Meade-King, Robinson & Co.	"	11,080	"	3	"	M. Colza	9,990	"
6	W. B. Dick and Co.	Lamp	1,900	New York	7	"	Lub.	49,950	"
7	Liverpool Storage Co. ..	Lub. Gr.	51,800	"	7	"	Lub. Gr.	270	"
7	Meade-King, Robinson & Co.	Lub.	4,000	New York		GRANGEMOUTH—			
7	Penwarden and Jackson ..	"	250	Antwerp	7	J. Currie and Co.	Tar oil	400	Hamburg
9	Pickfords, Ltd.	L. Paste	600	Hamburg	7	W. Graham-Yooll and Co. ..	Lamp	3,600	"
9	Crew, Levick and Co.	Lub.	1,050	Philadel.	7	"	"	4,400	"
9	Vacuum Oil Co.	"	6,800	New York	7	J. Currie and Co.	Lub.	1,040	"
9	Valvoline Oil Co.	"	1,230	"		LEITH—			
9	W. Gibson and Sons	Lamp	2,050	Boston	3	J. Currie and Co.	Lub.	360	Bremen
	BRISTOL—				3	"	"	980	Hamburg
22/7	W. G. Clarke	Lub. Gr.	240	Antwerp	3	W. Graham-Yooll and Co. ..	Lamp	7,580	"
3	Anglo-Bosphorus Oil Co. ..	"	880	Hamburg	3	G. Gibson and Co.	Lub.	400	Antwerp
5	E. Stock and Sons	Lub.	50	"	5	"	"	520	"
5	Pickford's, Ltd.	"	760	"	7	"	"	2,400	"
5	H. Pritchard and Co.	"	810	"	7	W. Graham-Yooll and Co. ..	Lamp	3,100	Hamburg
5	F. F. Fox and Co.	"	240	"	7	J. Currie and Co.	Lub.	490	"
5	W. Smith and Co.	"	56,760	New York	1	"	"	160	"
5	"	Lamp	800	"	9	W. Graham-Yooll and Co. ..	Lamp	7,150	"
5	H. R. James and Sons	"	3,400	"		BELFAST—			
5	"	Lub.	25,600	"	6	J. C. Pinkerton and Co. ..	Lub.	60	"
9	"	"	2,180	"		Total for Week	"	2,993,720	
	GOOLE—					Total for the Fortnight ..	"	7,124,720	
9	Lancs. and Yorks. Ry. ..	"	240	Hamburg					
	GRIMSBY—								
3	J. Sutcliffe and Son	"	70	"					

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVII. (New Series.)

SEPTEMBER 28TH, 1907.

No. 408.

Editorial Notes.

Our Navy and Liquid Fuel.

From time to time we have made reference to the progress which is being made by the British Admiralty in regard to the general adoption of liquid fuel in the Navy, that the recent announcement of the Admiralty's plans as to the erection of large storage depôts round our coasts, is a matter which comes with no surprise. In some cases, these storage depôts are at present under construction, while in others they have been completed, and have, in fact, received large shipments of fuel for Navy needs. It is evident now that the Admiralty have decided not to use liquid fuel as a supplementary power, as was at first generally believed, but to supplant coal by its use in every possible direction. In fact, our largest battleships—the "Dreadnought" for instance—regularly burn oil, while all our new torpedo craft are being fitted so as to consume liquid fuel.

Liquid Fuel Supplies? Whence Shall They Come?

The general adoption of oil fuel for the purposes of the British Navy raises that interesting question of supply, and to-day much speculation is rife as to the producing countries most favoured by our Government. In the past, some fairly large consignments have been received from Texas, where there is still plenty to be had, while the Far Eastern fields, with their almost unlimited resources, should place the possibility of a dearth of supply almost beyond the shadow of doubt. But our Government is anxiously looking to the development of the territory in Nigeria, to which we referred in our last issue. For the present, the future of the oil industry in the regions of the Gulf of Guinea is by no means assured, yet the evidences of large untapped deposits of petroleum being in that portion of the Ivory Coast are very abundant, and to-day no less than four English companies are exploring West Africa for oil, two being at work in the British possession of Southern Nigeria. In view of the possibility of shortly striking commercial quantities of oil in Nigeria, an ordinance has recently been adopted, which makes it clear as to the light in which the English Government look upon these territories, for it is to have the right of pre-emption of all crude oil raised, as well as of all refined products, while in time of war, the Governor, on behalf of His Majesty's Government, has the right to take control of the various properties producing petroleum. This fact in itself confirms the belief that England is looking to Nigeria for great things in time to come in the way of the production of oil for liquid fuel purposes.

Baku and its Production.

Upon another page of this issue we publish the figures of the crude oil production in the Baku oil fields for August, which reached only 39,400,000 poods. It will be noticed that the figure is about a million poods less than the production during the preceding month. The decrease has been due to the strikes on the oil properties of the Caspian Society and the Ter-Akopoff Co., which had scarcely any production during the month. Thus, throughout the first eight months of this year the Baku production has remained fairly steady from month to month at thirty-nine to forty million poods, the total figure being approximately 315,000,000 poods. During the corresponding period of last year when the oil fields had been scarcely restored after the catastrophe of the autumn of 1905, the production was only 275,400,000 poods, but during the corresponding months of 1905 it was 350,500,000 poods. Though matters have somewhat improved, therefore, when the production this year is compared to what it was last year, it cannot be said to be satisfactorily returning to its old monthly level of from fifty-five to sixty million poods, and so long as the total yield remains at its present low point the Baku oil market is bound to be anything but normal.

From Texas to the Gulf of Mexico.

It is no longer a scheme for the realisation of the future to speak of piping the production of the Mid-Continent fields to the Gulf of Mexico, there to be used in stimulating the refining industry which has during recent years grown to such a considerable extent in that part of Texas. Already we see that two of the trunk lines have been laid throughout their whole length, and now are pumping oil to the seaboard at the Gulf which hitherto has been pent up in the fields almost five hundred miles away. Without doubt, a new period of prosperity will now open before the American petroleum industry, and the refining branch will prosper to a greater extent than has been the case hitherto. The conditions which have led to the laying down of the trunk pipe lines to the Gulf form a most interesting chapter in Texas oil history. A steady decrease has of late marked the production of the Texas fields, and, as a result, the refineries have had to look around for the wherewithal to satisfy their needs. But coincident with the decrease in the Gulf fields, an enormous increase has been recorded in Indian Territory, and especially that portion known as the Glenn pool, and what is more, the oil was of a quality far superior to the Texas grades, containing as it did a large proportion of light oils. The difficulties of distance have now been overcome, and not only can the Gulf refineries draw enormous supplies from their new sources of supply, but the drain upon the stocks of Texas oil, which have recently been proceeding at an alarming rate, will now be obviated.

ROUMANIAN PRODUCTION IN JULY.

The production of crude oil at the Roumanian oil fields during July, according to the provisional statistics published by the *Moniteur du Petrole Roumain*, amounted to 96,805 tons, against 90,827 tons in June. When the July figure has been completed by the addition of the output of firms who have not yet made their return, the total will be found to be about 100,000 tons.

The production of the various fields in July, compared to June, was as under:—

	June. Tons.	July. Tons.
Prahova District—		
Bustenari	36,609	40,563
Campina-Poiana .. .	16,453	18,445
Moreni	26,384	28,311
Baicoi-Tintea .. .	6,178	4,401
Other Fields .. .	1,266	1,125
Total for Prahova .. .	86,890	92,845
Dambovitza District .. .	2,511	2,032
Buzeu District .. .	755	1,141
Bacau District .. .	671	787
Total	90,827	96,805

The production of the leading firms was as under:—

	June. Tons.	July. Tons.
Steaua Romana—		
Bustenari	9,978	9,930
Campina	14,562	16,670
Other Fields	1,330	1,516
Total	25,870	28,116
Regatul Roman Co. .. .	17,723	14,680
Romano-American Co. .. .	9,879	13,760
Bustenari Co. .. .	10,733	11,375
Telega Oil Co. (Sylva) .. .	4,402	4,558
Trajan Co.	5,060	4,521
International Co. .. .	3,192	3,346
Colombia Co.	2,107	3,370
C. M. Pleyte and Co. .. .	3,015	2,909
Aquila Franco-Romana .. .	1,615	1,834
Nafta Co.	685	680
Arnheemsche Petroleum Co. .. .	852	889
Galo-Romana Co. .. .	510	810
Alfa Co.	505	811

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 27th September, 1907, as follows:—

The market is very quiet, and prices are again easier. We make prices of oil sizes to-day as under:—

1C 18 $\frac{3}{4}$ x 14	124 sheets	110 lbs.	14/6	to	14/7 $\frac{1}{2}$	per box.
1C 19 $\frac{1}{4}$ x 14	120 "	110 "	14/6	"	14/7 $\frac{1}{2}$	"
1C 20 x 10	225 "	156 "	20/6	"	20/9	"

F.o.b. Wales. Tin lining and iron hooping extra.

The Jennings Field.—The Jennings field continues to furnish considerable excitement. At the beginning of the present month the Producers' Oil Co. brought in its No. 14 well, which is said to be now making quite 5,000 barrels daily. The No. 15 well of the company, drilled close to No. 14, is yielding about 2,000 barrels daily, both wells being equipped with compressed air.

The Glenn Field.—Everything possible is being done in this 9,000 acres of prolific territory in the way of erecting storage to take care of the production prior to its removal toward the Gulf. The total steel tankage in the field is now placed at about 7,000,000 barrels, 4,000,000 barrels of which has been erected by the Prairie Oil and Gas Co. In the Glenn field there are 715 producing wells, and during August these produced at the average rate of about 120,000 barrels daily.

LONDON OIL SHARE MARKET.

FRIDAY, SEPTEMBER 27TH, 1907.

Dealing on the London Stock Exchange has been of a somewhat irregular tendency since our last issue, the volume of business being on a much smaller scale and of a hesitating character. The Bank Rate remains unchanged, and the monetary outlook continues satisfactory, which encourages quiet buying of gilt-edged securities, and, latterly, of Home Rails on the brightening prospects of the labour difficulties.

The Miscellaneous Section has been particularly dull, and Oil Shares have been no exception to the general rule.

Last Monday week the sale of a few Baku Ordinary depressed the price of the Shares 3d., to 3s. to 3s. 6d., and Shell Ordinary fell 3d., also followed next day by a further decline of 6d., to 43s. 9d. to 44s. 3d.; but on Wednesday Californian Oilfields advanced $\frac{1}{8}$ to 6 to 6 $\frac{1}{4}$. Saturday's dealings resulted in a loss of $\frac{1}{8}$ in Schibaieff Preference to 1 $\frac{1}{8}$ -1 $\frac{3}{8}$, while Shells registered another slight shrinkage to 43s. 6d. to 44s. 6d.

At the end-September settlement, which commenced on Wednesday, 25th inst.; there was practically no account to be adjusted in Oil Shares; but rates of interest were generally easier. The "making-up" price of Anglo-Russians was fixed at $\frac{1}{16}$, Baku Ordinary at 3s. 3d., Preference 5s. 9d., Californian Oilfields 6, Russian Petroleum 4s., Preference $\frac{1}{4}$, Schibaieff 3s., Preference 1 $\frac{1}{4}$, Spies 7s. 3d. and Shell Transport Ordinary 2 $\frac{3}{16}$.

Latest quotations are to be found on page 180.

THE ADMIRALTY AND THE USE OF LIQUID FUEL.

In connection with the decision of the Admiralty to extensively use liquid fuel upon the British fleet, it is interesting to note that a very extensive scheme for the storage of oil fuel is contemplated at Portsmouth.

It is proposed by the Admiralty to construct six tanks, having a total capacity of more than 20,000 tons of oil. The tanks are to be situated on the Gosport shore of Portsmouth harbour, adjoining the Victualling Yard, and the approach to them will be dredged to enable the largest battleship or cruiser to go alongside the pier, to which supply pipes will extend, from which the ships will take in the oil. At present oil is stored at Portsmouth in converted gunboats.

The new oil storage tanks will be quite independent of the smaller tanks in Haslar Creek, where petrol for submarines is stored beneath banks of sand and shingle. The new works will figure in next Navy estimates.

The Admiralty is pushing on rapidly with the great oil fuel storage works at Turnchapel, in the Plymouth cattewater, and it is expected that these will be ready for use early in the new year. It is stated that when all the reservoirs are completed there will be storage for about 16,000 tons of petroleum. In addition to the storages on the Medway, it is also intended to make a fuel station at Dover.

The Third International Petroleum Congress at Bucarest.

A REMARKABLY
SUCCESSFUL . .
GATHERING. . .

THE SECTIONAL MEETINGS AND PAPERS.

After the meetings of the various sections of the Third International Petroleum Congress at Bucarest had concluded their sittings at the University (detailed reports of which will be given), the concluding meeting of the Congress was held on Friday (September 13th) at the Athenée Palace, where the Congress had been officially opened in the early part of the week.

All the delegates representing the foreign countries occupied seats upon the platform, while of members of

Dr. C. Engler announced that several propositions had been made to the Congress to the effect that the next Congress should be held in America.

Professor Zaloziecki, however, proposed that the next Congress should take place in Galicia and this proposition was agreed to.

Professor Hoefer thanked the Congress for the applause with which they greeted Professor Zaloziecki's proposal.



THE CONGRESS MEMBERS WHO VISITED THE OIL FIELDS.

the Congress there was a large attendance in the body of the hall, many members of the general public also being present.

Occupying a prominent seat in the centre of the platform sat the Prime Minister, A. Stourdza; the Minister of Agriculture, Commerce and Domains, Mr. A. Carp; Mr. E. Costinescu, Minister of Finance; Mr. V. Mortzun, Minister of Public Works; and Mr. I. Lahovary, former Minister of Domains.

Mr. A. Saligny, the Congress president, opened the meeting, but yielded the chair to the presidents of sections during the presentation of the reports of the respective sections.

The Congress adopted by acclamation the view expressed by Mr. Stourdza, the Prime Minister, through Mr. Dejardin, that all States should adopt a unification of methods to determine the measure and weight of petroleum products.

Mr. A. Saligny, president of the Congress, delivered a speech upon the different works of the Congress, and thanked the foreign members for their valuable collaboration in the labours of the Congress.

After some discussion it was agreed that the next Congress to be held in Galicia should take place in 1910—three years' hence.

Professor Zaloziecki thanked Roumania, in the name of Austria-Hungary, for the excellent reception accorded to the Congress members.

Mr. Loudon, delegate of Holland, thanked, in the name of all the Congress members, the Government and people of Roumania for the excellent and cordial reception accorded to the Congress members, and wished to the King of Roumania and the Roumanian people all possible prosperity.

Mr. A. Saligny, the president, then declared the Third International Petroleum Congress closed.

We will now proceed to refer to the labours of the various sections of the Congress, which were read at the plenary sitting of the Congress in the form of reports.

GEOLOGY, EXPLORATION AND EXPLOITATION.

(SECTION I.)

Dr. Mrazec opened the meeting of this Section on Monday, September 9th, by a brief address. He proposed to proceed to read the papers concerning the

origin of petroleum and to adjourn the discussion until the whole of the papers had been presented.

Mr. M. A. Rakusin, who spoke in German, then presented his paper upon "The Investigation of a Physico-Chemical Theory of the Geology of Petroleum."

The paper dealt with: (1) the geo-genetic qualities of



THE EXCURSIONISTS APPROACHING CAMPINA.

petroleum oils which result from polarimetry, and (2) the Day principle of filtration.

The geo-genetic qualities of almost all petroleum oils examined up to the present are the following:—

(1) An almost exclusive detrogyric rotatory polarisation.

(2) The impermeability of crude petroleum oils to polarised light, even in an excessively diluted solution (often only $\frac{1}{82}$ per cent.).

(3) The characteristic colourisation of distillates by trichloric acetic acid.

These properties lead to the conception of a slow and natural racemisation—*i.e.*, decomposition. Concerning the results the following fundamental formula can be given:—

$$A = b + z + v + f$$

A = Age of primary petroleum oils (the deepest).

b = Period of formation.

v = Period of racemisation.

s = Period of carbonisation.

z = Period of decomposition.

f = Period of filtration, according to Dr. Day's theory.

For petroleum oil of class n (of lesser depth) we have:

$$A_n = f + r + v + z.$$

These two equations were discussed from the point of view of the different values possible for r and v, giving eleven special cases for all modifications possible in all petroleum oils in the world.

Mr. A. Guiselin spoke in French upon "Method of Representation by diagram Permitting the Rapid Reading of the Composition of a Petroleum Oil, and giving Indications as to its Origin." He set out a new diagrammatic method, which enabled one to immediately recognise the origin of an oil. By tracing the curve shewing the specific gravity in relation to tempera-

ture different diagrams are made, according to the origin of the petroleum.

Mr. Grzybowski spoke in French upon "The Contribution to the Theories of the Origin of Petroleum, based on the Latest Observations at Boryslaw."

Mr. Papon Lameigne, who also spoke in French, then addressed the section upon "The Internal Origin of Petroleum."

He pointed out that the eruptions of igneous rocks were followed by gases of different natures, known by the name of fumeroles, moffettes, etc. He also gave a concise classification, and insisted on the chemical composition as being the chief guide to origin, especially in regard to the presence of hydrogen, methane and other hydrocarbons. He explained the formation of hydrogen by the separation of the acetylene in its turn giving rise to different hydrocarbons.

Mr. Charitschkoff spoke upon "The Classification and Formation of Petroleum Oils." He asked whether the different petroleum oils should be considered as derivatives, or as well-defined minerals. As far as Roumanian oil was concerned it might be considered as a mixture of two liquid minerals—Varnenite and Markownikite (in honour of Prof. Markownikoff). Speaking of the origin he gave an analysis of an asphalt found on the Caucasus, and another analysis of a Baku petroleum oil. Those analyses shewed a great analogy between those two products. Since they saw before their eyes the formation in nature of large quantities of asphalt, it was impossible to deny the intimate connection existing between that primary formation and the various hydrocarbon products. He considered the organic theories insufficient to explain the large quantities of petroleum found in nature. It was only the natural anorganic laboratory which could satisfy all the conditions necessary for the formation of large quantities of hydrocarbons.

Mr. Mircea read a paper upon the "Genesis and Mode



THE DECORATIONS AT BAICOI.

of Occurrence of Petroleum in the Earth's Crust, as shewn by the Results of Investigations, and by the Co-ordination of the Practical Results Obtained by Boring." Basing his remarks upon the conditions prevailing in the petroleum deposits at Moreni, the author dealt with the questions indicated in the title. In regard to the origin

of petroleum, Mr. Mircea came to the conclusion that neither chemistry nor geology would be able to solve the difficult question.

The next paper presented was by Mr. G. Munteanu-Murgoci, entitled, "The Petroleum Oils of Balteni in Relation to Lignite."

He described in a general way the petroleum deposits at Balteni (Oltenia), the strata of which go alternately with layers of lignite. The district is very little dis'ocated in a geological sense, and the strata are almost horizontal. The oil, he said, could not be considered as a secondary deposit formed by migration. Some geological facts were considered by the author as connecting the oil strata with the lignite deposits found close by, and forming the base of the oil strata. These lignites were very bituminous and often broke out into spontaneous combustion, lasting for years. Balteni petroleum might be a product of the concentration of hydrocarbons derived from the natural distillation of lignites.

anorganic origin of hydrocarbons, we have to consider, first of all, the natural conditions approaching most closely those required by chemists. These conditions are offered to us by the incandescent magmas which give birth to eruptive rocks and post-volcanic phenomena. The question thus resolves itself as follows:—

Can incandescent magma contain hydrocarbons? Can these hydrocarbons come out, and in what regions must they be looked for? The hydrocarbons can be formed during the post-volcanic period at a depth, the surface phenomena being characterised by the oxydation of carbon. The metalliferous veins, and particularly veins of sulphur, appear to be connected with the presence of hydrocarbons at least in small quantities, and therefore must also be in close connection with the large petroleum deposits. This, however, has not been proved by facts to the present day.

Professor Hoefer drew attention to the presence or



A VIEW OF THE CAMPINA-POIANA FIELD.

Mr. Tietze, the chairman, thanked the lecturers for having treated such difficult questions, and opened the discussion.

Dr. Day, in opening the discussion, maintained that a geographic classification was not satisfactory, and there was need for a chemical classification, both quantitative and qualitative. For that purpose it was necessary to have recourse to a method, which allowed the separation of the various component parts of petroleum oils without producing a decomposition of the primary product. He proposed the filtration method which he had invented some years ago, and which had given satisfactory results. Moreover, the process of filtration and consequent separation of fractions occurred in nature. That fact gave them the key to explain the different chemical properties of oils from different strata of a petroleum field. Dr. Day succeeded in proving that by filtration the composition of petroleum oils became more and more simple, and that the oils of the lower strata had the more complicated chemical composition.

Dr. Mrazec: In order to discuss the theory of

sulphur under a petroleum deposit in Galicia, which is, however, an isolated case.

Professor Engler said that it was the geologists who in the first place had to thrash out the question of the organic or anorganic origin of petroleum.

Dr. Day resumed the discussion, saying that it was impossible to admit a petroleum which was found in an altogether primary deposit.

Professor Hoefer was of the opinion that the geologists had to answer the question of the origin of the materials which had given birth to hydrocarbons. At Kongsberg in Norway, veins of mineral hydrocarbons had been found. He combated Dr. Day's theory, citing instances from North America, which spoke against the filtration of one and the same oil.

Dr. Mrazec touched upon the question of the migration of petroleum, and maintained that in the neogenous deposits of Roumania it was produced by capillarity under great pressure. Migration through fissures was excluded, because the existence of crevices in soft rocks, such as they found in the neogenous formations in

Roumania, was impossible. Petroleum could migrate directly through clay, if it were dry and soft. In hard rocks of flysch migration through crevices could take place.

Mr. Andrussow believed that it was not the great mass of the hydrocarbons which spoke in favour of an-organic origin. It could not but be admitted in any case that micro-organisms also formed enormous deposits, and could have brought about the formation of enormous quantities of petroleum. The main formations of hydrocarbons were always clay formations.

Mr. Rakusin supported Dr. Day's theory, and believed that the pressure of gas produced the differentiation of petroleum oils. To his mind the origin of petroleum was indisputably organic.

Mr. Iscu stated that petroleum travelled through crevices which opened up during the bending in the synclinals, and more especially in anticlinals. The petroleum was concentrated by the action of water in the anticlinals. Those were the directing lines of petroleum deposits, established once for all. In his opinion, the origin of petroleum could be both organic and anorganic.

Mr. Tietze drew attention to the fact that petroleum was only found in certain formations. According to the anorganic theory petroleum should be found in the Carpathians just as well as the flysch and neogene formations. Hydrocarbons were on the contrary connected to the organisms of the said formations, and were therefore exhaustible.

Professor Hoefer, basing his arguments also upon the experiments made by Dr. Engler, admitted that petroleum owed its origin chiefly to animal remains. But it would be necessary to investigate whether the petro-liferous formations also contained vegetable micro-organisms, more especially diatoms.

Dr. Day described an experiment made by him on the migration of petroleum. He had demonstrated that oil rose by capillarity in a tube filled with clay and closed on the top. The pressure exercised by the oil on the air driven to the upper part of the tube amounted to 30 atmospheres. On cutting the top of the tube the impregnated clay was thrown up into the air.

Dr. Engler asked the exponents of the anorganic theory of the origin of petroleum to explain the rotative power, which had been established in most petroleum oils.

Dr. Day added that there remained to be determined the exact rotative power of the bodies entering into the composition of different petroleum oils.

The meeting was then adjourned.

NOTES ON SALT WATER ASSOCIATED WITH PETROLEUM.

Mr. ALFRED LANE, State Geologist of Michigan, presented the following brief paper upon the above subject:—In the accumulation of petroleum in commercial quantities it is well understood that too active a circulation and too great a disturbance of the strata, are unfavourable. It is also known, that in boring for petroleum, it is quite common to find beneath deposits of more or less saline waters. These saline waters, lying in a relatively undisturbed strata and separated from the surface not merely by impervious beds of clay and shale but by oil or gas, should be relatively free from circulation, and their salinity might well be

supposed to be in large part that of the original ocean. This original ocean seems to have contained in the early times a relatively larger proportion of calcium chloride than at present, although as a whole it may have been less concentrated than now. This calcium chloride seems to have been slowly decomposed by incoming carbonates, with the precipitation of calcium-magnesium carbonate, leaving sodium and magnesium chlorite to remain in solution. It seems possible that one might date the strata by the chemical character of this salt water. I have been making a number of tests in this direction, and would feel very grateful to anyone who is exploiting such holes for petroleum, if samples of the salt water coming beneath, and especially analyses of the same, could be saved and sent me.

For the purpose of testing such waters, as well as testing oil or gas in a preliminary way, Bausch and Lomb, the well-known instrument makers of Rochester, New York, have made for me a total reflectometer after the same idea as the instrument devised by Bertrand long ago, but somewhat modified. It is convenient to the pocket, and it is but a simple process to put a few drops of the substance in a little triangular trough for the purpose, and read its relative index of refraction, in this way determining the concentration of the salt solution or the gravity of an oil. The method is obviously only approximate, agreeing in this respect with the hydrometer in which no account of the temperature is taken.

RESUMÉ OF THE TEXAS OIL FIELDS.

Mr. A. F. LUCAS, of Washington, presented a most interesting paper upon the above subject. He said that the coming in of the Lucas well, January 10th, 1901, marked an unlooked-for era of activity in the petroleum industry of the United States, and had stimulated by its advent a wonderful development not only in South-east Texas and Indian Territory, where it was now mostly advanced, but throughout the United States.

Spindle Top, three miles from Beaumont, the first field of the series with its first well, could scarcely be called a discovery, but a search for a precedent or prospecting in order to check some physical surface indications heretofore unknown, or not understood in the annals of oil developments.

The first oil discovered in Texas was obtained in Corsicana while boring a well for water for the town use, and as the water was unfit for domestic use, owing to its containing some oil, Messrs. Guffey and Galley undertook to systematically prospect for oil in 1894, with the result that, after repeated attempts, they obtained the production of one barrel, which was subsequently increased in other wells to five, and later on as high as 20 and 30 barrels each well per day, of a 36° B. gravity oil, therefore owing to this moderate production not much attention or effort was exercised to look into possible larger oil productions in other parts of Texas.

The exceptions may be recorded here that Messrs. Savage Bros., oil operators from West Virginia, began in 1893 the boring of some wells in Sour Lake. They were actuated by escapes of gas bubbles which appeared on the surface of a small lake, and in 1895 they found oil at about 230 feet in depth. They drilled five wells, none deeper, however, than 280 feet.

The Gulf Coast Refining Co. built a refinery there with a capacity of 100 barrels daily, and Messrs. Savage Bros entered into a contract to supply this refinery with 100 barrels of crude petroleum daily, but this was found to be impossible, and the refinery was closed and dismantled.

Sour Lake was known by the Indians and the earliest settlers, who used the water for medicinal purposes. The escape of gas bubbles on the water of the lake caused the water to become acidulated, which together with the acid mud and the finding of occasional flour of sulphur which condensed on the surface near the gas escapes (especially noticeable after a drought), gave opportunity to attribute the water to various medicinal properties above alluded to, and a hotel and sanatorium having been built there, the bathing and drinking of the water became quite popular.

Messrs. Savage Bros. were employed by the Gladys City Oil Gas and Manufacturing Co. of Beaumont, which was organised for that purpose, to drill a test well on Spindle Top, which they did in 1894, reaching a depth of 285 feet, when the work was abandoned. The following year Mr. J. Looney also made a feeble attempt, but failed in shallow depth.

Mr. W. B. Sharp, an experienced oil operator from Corsicana, undertook the drilling of a well there on his own account in 1896, but after reaching a depth of 290 feet, the well was abandoned.

The writer, who began to bore on Spindle Top in 1900, noted the 10-foot elevation from the surrounding prairie, which later on was conceded to be a mound, the escape of sulphuretted hydrogen gas,

the acid waters, and the marked absence of any possible escape of hydrocarbons on the surface, yet there being no precedent upon which to base possible results, especially in such recent geological horizon, he decided to drill a well, which reached the depth of 1,139 feet, and which became known as the Lucas wells.

Oil was tapped at a depth of 1,120 to 1,139 feet, and the 4-inch rod used in drilling was shot out of the well, carrying block and tackle with it. The estimated capacity of this well was 75,000 barrels per day. The well went wild for 10 days, producing during that time approximately 800,000 barrels of petroleum, but it was successfully capped the tenth day.

The results attained on Spindle Top started oil speculators and capitalists on a search for oil mounds, and many mounds were found apparently offering the identical surface indications as Spindle Top did, but in most instances they proved a deceptive snare.

One of the first mounds to be prospected after the success of Spindle Top was Big Hill in Jefferson county, and about 25 miles south-west from Beaumont. This hill rises in a gentle swell above the surrounding prairie and attains a height of about 45 feet, and contains about 1,500 acres.

The rotary, or rather the hydraulic method of drilling, is now almost universally used in the Gulf coastal plain oil fields, and it may be added that the successful drilling of the first well near Beaumont, after many failures, was largely due to the adoption of the rotary method which was found admirably fit to cope with the many difficulties encountered in drilling Spindle Top. It has, however, the objection that the drillings or cuttings cannot be

most part unconsolidated, and the vast amount of drilling done on these fields since the spring of 1901 and the keen competition among the drillers and manufacturers, has brought this method to a high state of efficiency.

The system consists essentially in rotating a vertical drill rod which we will assume to be a four or six-inch line or drive pipe, through which a continuous stream of water is forced. The drill rod is supported by a cable passing from a hoisting drum over a pulley at the top of the derrick, and hence by block and fall to a swivel attached to the top of the drill rod, the descent of the latter being controlled by the driller by means of a feeding device.

The lower end of the drill rod is supplied with one of several forms of bit, adapted to the kind of material to be drilled. The material loosened or cut by the rotating bit is carried upward to the surface by the water ascending on the outside of the rod. The ascending current of water keeps the hole clean, and allows the drill rod to turn freely. It is essential that the flow of water should be continuous, and a drilling outfit is always supplied with two force pumps, in order to avoid the danger of stopping the flow which may clog the rod. If the well has passed through a pervious stratum, such as a bed of loose sand, the ascending water is liable to pass into that stratum instead of returning to the surface. This would quickly result in the clogging of the hole by cavings or abrasions, and in order to prevent it, the water which is pumped in is mixed with a large amount of fine clay. By this means, the outlets through porous beds are sealed up, the unconsolidated material forming the walls of the hole is prevented from caving,



GENERAL VIEW OF THE MORENI OIL FIELD.

always vouched as coming from the bottom, and unless the hole is kept always cased down, the cuttings get mixed with the upper layer of material.

After the bringing in of this first well, the demand for rotary outfits sprung up to enormous proportions, but not only was it found impossible to obtain sufficient in the market, but there were only a very limited number of men capable of operating them. There were also many leases, whereby the leasee was obliged to commence operations within a certain time or forfeit the lease. It was finally resolved to adopt the cable method of drilling, which was at once put in practice, but with disastrous results, and so had to be ultimately abandoned, and the rotary method adopted in its place.

The cause of this failure was very simple. By the cable method the casing is open to permit free play to the cable, and on the bit reaching the first layer of quicksand, which in this instance was at about 245 feet there was encountered a heavy pressure from below, forcing the quicksand upward into the casing or walls as high as 100 feet and more, thus jamming the bit, stem, jars, sub and part of the cable, and in many instances making it impossible to draw it out.

To obviate this obstacle, the operators were obliged to resort to the rotary drill, which they eventually did. Many first-class drillers, accustomed, however, only to the cable method, obtained positions as helpers in the field where rotary outfits were used in order to acquire the practical experience with the rotary.

The rotary system is unquestionably the most rapid and economical method where the formations to be penetrated are for the

and the water returns unimpeded to the surface.

Even with the foregoing the writer found much difficulty in drilling the first well through the quicksand beds, having pressure from below, which could be kept down only well enough as long as the pressure from the pump was kept in excess of the upward pressure, yet, when the length of rod has reached its maximum and is spent, necessitating to screw another one on, the water swivel would of necessity have to be unscrewed and another length of rod with another swivel ready hanging to be quickly screwed on when the spent swivel is taken off. To do this it is imperative to slack the pump somewhat while the new length of rod is being quickly screwed on, yet in this short interval, the pressure holding down, the quicksand is relieved (except for the weight of the column of water) resulting in a heavy gush of water, which spurts out exactly in proportion to the volume of sand that may have penetrated into the rod, so that when finally the rod is screwed on and the pump set going, it will soon stop and the gauge will register from 500 to 700 pounds pressure, shewing conclusively that the lower portion of the rod has filled up with quicksand. In such an event, there is nothing left to do but to pull out the whole of the rod and clear it of the containing sand, which will be found a hard task as the sand in the rod is found almost as hard as sandstone, and difficult to loosen. To obviate this serious difficulty, the writer inserted a wooden check valve into a coupling of the rod before reaching quicksand, which was found to work admirably. These check valves are now manufactured by the supply houses in all sizes, out of light cast iron, spider-like shape, with rubber valve and spring on bottom to screw into a given size coupling.

With this simple device it was found possible to drill in territory where pressure from below made it a serious obstacle for a time to achieve the desired end.

The failure to get a return of the water does not necessarily prevent further drilling, for if it escapes into porous or cavernous rock, it may for a time at least carry with it the cuttings, and thus keep the bottom of the hole clear. If the uncased part of the hole does not cave the working of the tool is not interfered with.

A phenomena, sometimes associated with the loss of water, is the sudden dropping of the drilling tools. Such drops are generally believed by drillers to indicate great cavities. Small drops while drilling in the limestone may be so explained, but in many instances a great cavity in the limestone cannot be assumed. Many drops are reported as occurring in a sand just below a hard plate of limestone. The drill may have worked hours or days on the thin limestone, a strong current of water all the time washing the bottom of the hole. This current may have access by a fracture to the underlying sand, and wash out a great cavity in the latter before the drill has passed through the limestone. The tools then drop.

The forms of bits most commonly used are the fishtail bit, which is adapted to soft materials, although occasionally has proved capable to cut into a much harder material; the core barrel bit is better adapted for hard material. When rock is encountered the ordinary fishtail bit makes slow progress, and the drilling is greatly facilitated by the use of the adamantite, or chilled shot, the cutting being done by a quantity of chilled steel shot which revolves under the rim of the tube.

Some drillers in encountering hard rock, rig up a regular churn drill, the cable passing over a pulley at the top of the derrick, and thence down to the engine fly wheel, where a turn around the crank pin gives the required lifting-and-dropping motion to the drill bit.

When everything is ready to begin operations, a length of rod with the bit attached is made fast to the water swivel, and lifted into the derrick. The bit screwed on the rod is passed through the rotary far enough to allow the jaws to be brought together and clamped so as to hold the drill rod and rotate it, while it will of its own weight slide down. The driller starts the engine, and sets the pump in motion. As soon as the water flows freely, he slackens the friction and allows the drill to descend.

The force of the water, which varies from 40 to 75 pounds, passing through the rod, finds its way as jets through two holes, one on either side of the fishtail bit, and washes the freshly loosened sand up to the surface through the space between the drill rod and the walls of the well. As the work progresses, the driller lowers the rod slowly, holding it stationary, or letting it descend, according to the character of the material through which the bit is working. From this time, on the whole, responsibility rests on the judgment of the driller. The drilling crew generally consists of four men—the driller, two derrick men and the fireman, with a corresponding shift, as the work proceeds night and day.

In starting a well, arrangements are generally made for the insertion of a 12-inch casing to begin with, and in boring for this size the drill rods are generally made of 6-inch casing with a 13½-inch bit. This sized bit is used to allow the couplings at the joints of the 12-inch casings to slide past without damaging the wall of the well. The length of 12-inch casings varies from 300 to 800 feet, depending largely upon the nature of the ground and the skill of the driller.

Following the 12-inch casing, the hole is next drilled for an 8-inch or 9-inch casing, and in either case a 10½-inch bit is used.

This 9-inch casing has in several of the Spindle Top wells been set in the oil sand. After setting the 9-inch casing, the driller proceeds downward with a 6-inch casing. Occasionally a still further reduction to a 4 and even a 2-inch becomes necessary.

The phenomena of gushing, so common in all the large fields of the Coastal plain, implies great pressure. In some cases it has shewn almost explosive violence, blowing out casings and breaking heavy cast iron valves. The maximum pressure has never been approximately measured. The most reliable measurement varies from 79 to 350 pounds. The following are the most trustworthy measurements which have been made of closed pressure:—The Lucas Oil Well, 119 pounds; American Oil and Refining Co., 112 pounds; Trans-Mississippi Co., 300 pounds; Yellow Pine Co., 440 pounds; and The Hooks Well, 127 pounds.

It appears highly probable that the pressure in the oil reservoir is due largely to the expansive forces of the associated gas. When the oil rock is penetrated by the drill, it is usual, though not always necessary, to remove the water from the casing by baling. When the pressure is thus relieved there is first a rush of gas followed by a stream of oil, which is expelled with great violence.

To wells that shewed signs of exhaustion to gush of their own accord, a method was introduced to carry air under pressure to the

bottom of the well by means of a small pipe within the casing. When the air is turned on and accumulates sufficient pressure to lift the column of oil in the casing, the oil is expelled in a pulsating stream, exactly similar to a natural gusher.

After giving a number of statistics, with which readers of the REVIEW are already familiar, Mr. Lucas concluded by dwelling upon the present conditions of the Texas fields.

He pointed out that while the production of the Gulf coastal plain may be said to be now stationary, with a tendency of further decline, the Indian Territory, which is situated adjoining the north of Texas, is now in a high ascendancy not only with a prolific steady production, but on account of lighter grade of oil averaging 38° B which has been found highly advantageous of result to refine by mixing with the heavier Texas product, and with that end in view, the influx of capital for development work into the Indian Territory has been quite great in the last few months.

Most of the larger Texas and Louisiana oil producers are now successfully operating in the various fields in Indian Territory, Oklahoma, Creek and Osage Nations, more so as the leading oil and refining companies of Texas and Louisiana have found it expedient to build very large steel tankages for the purpose to store the oil for their refineries on the seaboard.

The J. M. Guffey Petroleum Co., in addition to their having acquired large oil territory upon which they are erecting steel tanks to store millions of barrels of crude oil, are also approaching completion of an 8 and 10-inch pipe line from the Indian Territory fields to connect with the system of pipe lines they own in Texas, which will require in the neighbourhood of 500 miles of pipes. This company already own and operate quite a large system of pipe lines, connecting the various oil fields of Texas and Louisiana down to Port Arthur, where their large refinery is located.

The Texas Co. are following the same example, and both these companies expect to complete their main lines from the Indian Territory to Port Arthur within a very short time. Meantime they are transporting daily train loads of Indian Territory crude oil to their refineries.

Fortunately for the producers, refiners and shippers of oil from Indian Territory, it must be recorded that the development going on there now is not characterised by the feverish and speculative booms that Spindle Top underwent, with the other Texas and Louisiana fields suffering their share. On the contrary, the Indian Territory development seems to be now of a healthy and of large business-like proportions, which gives promise of long years of steady production, and prosperity to all who are interested.

“THE DISTILLATION, CRACKING, AND GASIFICATION OF PETROLEUM HYDROCARBONS.”

By DR. PAUL DVORKOVITZ.

Though the title of my paper is “The Distillation, Cracking, and Gasification of Petroleum Hydrocarbons,” it might perhaps be altered with advantage to a more general one—the influence of heat upon petroleum hydrocarbons. Every investigator who has had to treat petroleum, either in the laboratory or at works, knows that the greatest difficulty which has to be met with is that of separating the various constituents of petroleum by means of heat. Petroleum represents a mixture of various hydrocarbons, which in their physical and chemical aspect closely resemble each other, and the separation of these hydrocarbons by means of distillation is not so easy as is the separation of a mixture of such chemical compounds whose physical and chemical nature are each widely different.

Moreover, in the distillation of petroleum generally, we find that besides the separating of such compounds as are already in existence, a new combination of hydrocarbons is formed, owing to the fact that under the influence of heat, decomposition, or rather splitting of the existing hydrocarbons, takes place, when new combinations are formed, and these considerably interfere with the aims of the investigator to define the properties of the original mixture of hydrocarbons.

To more clearly illustrate what I mean, I may here relate an experience I had in 1884 in preparing at the refinery I then managed at Baku certain petroleum fractions which had to be investigated in the laboratory at the Moscow University. For that purpose I separated ten barrels of distillate at the works, these distillates boiling between 125° and 135° C. These ten barrels were forwarded to the University of Moscow as the crude material for investigation, and of this crude material, after months and months of distillation—we had 85 distillations—we were able to obtain something like about eight litres of a hydrocarbon with a permanent boiling point

of between 126° and 127° C. At each distillation we had always a large quantity of hydrocarbons boiling below and above the respective boiling points at which the distillates had been collected, and this has undoubtedly been experienced by other investigators of petroleum hydrocarbons—that by the application of heat we do not only achieve the separation of the original hydrocarbons, but at the same time a constant interchange of molecules takes place, and new combinations are formed.

This fact led Prof. Kharitchkoff to investigate the original nature of the various constituents of the petroleum oils not by means of distillation but by means of various solvents, and in this way he has been able to carry out his very interesting comparisons between Russian petroleum oils from the various producing districts, and he has come to conclusions which could not have been arrived at had he had recourse to the ordinary way of separating the hydrocarbons by means of heat.

Although the application of heat for the scientific investigation of the character of the original constituents of the various petroleum hydrocarbons is not a reliable medium, yet from the technical and commercial point of view the application of heat still represents the best way of achieving results, and, if I may say so, even from a scientific point of view, the application of heat has a far wider interest if not in deciding the original character of the oil, then undoubtedly it is of the greatest interest in regard to the transformations which take place under the influence of heat when the original hydrocarbons are changed into a series of compounds which entirely differ in their physical and chemical character.

In my opinion, the application of heat can well be divided into three stages: (1) heating the hydrocarbons to their boiling points; (2) above their boiling points; and (3) heating up to the point of gasification. The first of these three stages is a very complicated one. The boiling point is the temperature at which the expansive force of heat becomes equal to the pressure of the air and at which the phenomena of boiling invariably appears. Now, as I have said, petroleum hydrocarbons represent a mixture of compounds very similar in their physical and chemical character, and the temperature of their boiling points depends entirely upon the variety of the various compounds which constitute the mixture under investigation.

It is a fact that if two compounds of different boiling points are submitted to distillation, we find that the least volatile commences to distil below its boiling point, this being due to the fact that all volatile bodies evaporate below their boiling points, and this takes place with greater facility the higher the tension of the vapour, and the quicker the surrounding atmosphere is changed. The vapour of the lower boiling points carries that of the less volatile substances with it, and passing through the mixture and being quickly condensed, a new atmosphere is being constantly formed.

On this principle some few years ago the well-known investigator—Mr. V. Ragsine—has patented an apparatus for distilling heavy petroleum oils by means of petroleum spirit vapour. The author has thus described the influence of benzine in distilling the heavy oils:—"Superheated vapour of benzine, being of high elasticity, entering the still filled with a substance boiling at a temperature much above the boiling point of benzine naturally produces the same effect as superheated steam. Entering a body of allied composition and saturating the same, it not only considerably lowers the boiling point of it, but, so to say, extracts the individual hydrocarbons composing the mineral oil. It has been proved beyond doubt that distillation proceeds at lower temperature with benzine than when carried on in the ordinary way or with steam. By applying benzine to the distillation of mineral oils, the oils boiling at the highest temperatures, and mineral grease were obtained, a feat not obtainable by the steam method."

The practical application of heat for the purpose of separating petroleum hydrocarbons at their boiling points without bringing into being the formation of hydrocarbons of a different series, which means the transformation of the original petroleum hydrocarbons into something else, has been carried out in various ways, and the application of various methods and apparatus has been chiefly dependent upon the variety of products which it has been necessary to separate from the mixtures, and the character of the original petroleum oils which it has been required to treat.

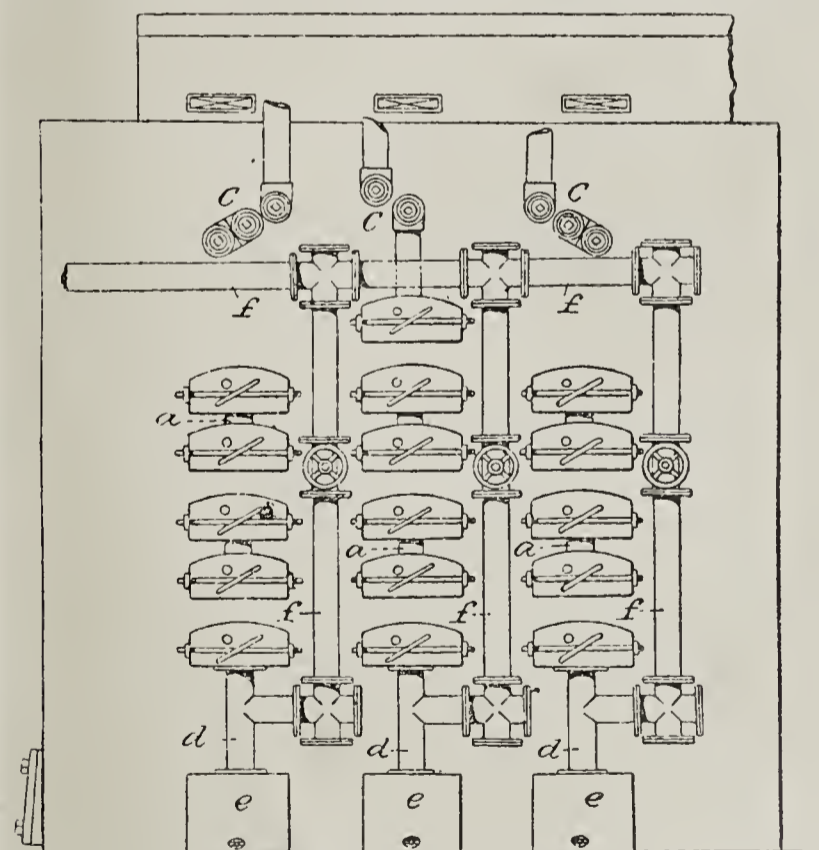
The systems used for separating these hydrocarbons can be divided into two main groups—(1) periodical distillation; (2) continuous distillation. I need not describe the numerous apparatus used for the carrying out of periodical distillations, but might here mention that the two methods chiefly followed are the distilling off, or re-distilling, of the lightest hydrocarbons of petroleum spirit by means of steam, and the heavier ones with or without steam. With regard to the continuous distillation, there is a larger variety of apparatus used. The first practical system of continuous dis-

tillation was introduced by Messrs. Nobel Bros. at Baku about the year 1882, although Prof. Mendeleieff had the year before introduced a continuous process of distillation at Moscow at the refinery of Messrs. Goubonine. So far as I know, however, this system was never widely adopted, but on the other hand, Messrs. Nobel's system of continuous distillation was so applicable to the heavy nature of the Russian oils, that it found general adoption, and to-day there is scarcely a refinery in Baku which does not treat its oils by this system.

The reason for the success of this system of continuous distillation lies chiefly in the character of the oil, for the Russian crude oil does not produce more than 35 per cent. of light oils, and thus by means of the periodical system the necessity arose of heating up the 100 per cent. of the oil in order to obtain 30 to 35 per cent. products, and then it was necessary in addition to make special arrangements for the purpose of cooling down the residuals before they have been drawn off, and thus there arose loss of time and money to a very large extent. At the same time, the products obtained by the periodical system were to some extent cracked, and so Russian oil for a long time could not be satisfactorily used for burning in lamps, even in Russia. With the continuous system, however, the Russian refiners have been able to work at a much lower temperature, the separation of the fractions has been complete, and the quality of the oil improved to such an extent that now, as you all know, Russian oil occupies a leading position in the world's markets.

Although the continuous system of distillation was introduced in the early eighties, yet the application of the same has been restricted to the separation of the light oils only. So far as I know, the application of the system for lubricating oils was first introduced by myself in England, where I established works for the purpose of manufacturing lubricating oils from Russian residuals. Since then this continuous system of distillation for heavy oils has been introduced in most of the lubricating oil refineries in Baku. But even now the system is only used for the purpose of removing a certain portion of the lubricating oils, for the heavy cylinder oils are still left in the residuals, and again it cannot be used for very heavy oils—especially those which contain water—heavy oils like those of Novorossisk crude, where the specific gravity is about .935, the Hanover oils, those from Mexico, and many other oils where the specific gravity ranges from .930 to .950. When the crude oil is mixed with water, then the separation presents considerable difficulty.

Some years ago, I had to design an apparatus for the



APPARATUS FOR MANUFACTURING AROMATIC HYDROCARBONS FROM HEAVY PETROLEUM OILS.

purpose of distilling the heavy crude oil of Novorossisk, which contained from 25 to 30 per cent. of water. The system which I adopted for that purpose was to force the oil through a series of pipes heated up to a required temperature, in the form of a spray into separators, and in that separator superheated steam has been introduced which has carried off the oil and water vapours to the condensers, and pitch which has hardened on becoming cool has continuously run out from the separators. The condensed distillates have then been submitted to ordinary periodical or continuous distillation, and separated into the variety of products required. This system is so far different from Nobel's system in

that it requires only one still for the purpose of separating all the vapourisable products from the pitch which, under ordinary circumstances, cannot be removed without undergoing a certain amount of cracking, this cracking, reducing considerably the value of the products received, especially the lubricating oils.

A similar claim for removing the heavy hydrocarbons without cracking has been made, as I have said before, by Mr. Ragosine; but so far as I know, neither of these methods have found wide adoption.

Now the cracking of the oils, as is known, is due to the fact, observed in the sixties by one American refiner, that a certain fraction of the oils comes into contact with a superheated surface higher than its own boiling point. As a result of this contact, a splitting or cracking takes place, and generally oils of a lighter specific gravity are formed.

To illustrate this, I carried out a number of experiments with various refined oils. I submitted the respective oils to boiling in an ordinary distilling flask connected with a reversed condenser, thus the vapours formed condensed into a liquid and fell back again into the flask coming into contact with a superheated surface, the temperature of which was above the boiling point of the condensed vapours.

The analysis of the oils used for the experiments are as under:—
Fractional Distillation.

Origin.	Sp. Gr.	Boil. Point.	Up to 150° C.		Up to 250° C.		Above 250° C.	
			Per Cent.	Sp. Gr.	Per Cent.	Sp. Gr.	Per Cent.	Sp. Gr.
American..	793	118° C.	2.2	748	66.0	783	31	817
Russian ..	823	98° C.	6.7	780	72.0	816	21	856
Roumanian	823	78° C.	6.5	731	72.4	818	21	860
Texas ..	821	110° C.	8.0	773	87.0	821	5	893
Borneo ..	838	130° C.	4.8	713	68.2	825	27	918

The above oils have been submitted to four hours' boiling, with the result that Roumanian, Texas and Borneo oils have not changed at all, but the American and Russian refined have changed as the following table shews:—

American.		Russian.	
Boiling point 110° C.		98° C.	
Up to 150° C.	1.6% — 0.737 sp. gr.	..	8.2% — 779 sp. gr.
„ 250° C.	70% — 0.782 „	..	73.6% — 817 „
Above 250° C.	28% — 0.819 „	..	18.0% — 856 „

These results clearly indicate that both those oils, especially American under conditions where the vapours came in contact with a superheated surface (as previously referred to), undergo an interchange of molecules whereby new compounds of a similar character to the original ones are formed, and this is shewn in practice with the cracking process. So far as I know, in a great many refineries in America this process has been introduced with considerable success.

Several apparatus for the cracking of oils are designed. But in spite of all the efforts made, especially with the cracking of the Baku residuals, where some years ago it was a matter of the greatest importance to increase the percentage of burning oils from the Baku crude, no system has yet been discovered whereby a burning oil of really good quality can be obtained by this process.

In most cases, the splitting of petroleum hydrocarbons causes a transformation, and simultaneously with the formation of light oils of a petroleum character, it also forms heavy oils of quite a different character from petroleum, of which I will speak later.

I now come to the third stage of the application of heat, and to my mind this heating up of petroleum hydrocarbons to a gasification point presents a phase of the subject of the greatest interest, not only to scientific investigators, but also to practical men. It is a well-known fact that at a high temperature the petroleum hydrocarbons undergo a complete change. Its physical and chemical character entirely disappears, and the transformation is so complete that when we study the products resulting from this transformation, we can scarcely conceive that the original material was petroleum. In addition to the total range of aromatic hydrocarbons similar to those obtained from the distillation of coal tar, there is still a considerable number of other aromatic hydrocarbons which await proper investigation.

The use of petroleum hydrocarbons for the purpose of manufacturing gas, at all events in England, dates from the year 1828, when a certain Mr. Taylor applied oil for this purpose. There are two different systems for gasifying oil, namely, for the purpose of producing oil gas pure and simple, and of this the most successful are the Pintsch and Young process, by which oil is submitted to the highest temperature possible, when a complete destruction of the petroleum hydrocarbons takes place by which the gas is formed. The other system consists of heating up the respective petroleum hydrocarbons to such a temperature at which a complete transformation of petroleum hydrocarbons into aromatic hydrocarbons

takes place. As the investigation of that transformation has been chiefly conducted at the University of Moscow, it was naturally those who were associated with the investigations who tried to find a practical means of carrying out on a large scale the results already achieved in the laboratory. It fell to my lot, when I designed an apparatus for the distillation of the heavy Novorossisk crude, to also design an apparatus for utilising the distillates obtained from the crude for the purpose of manufacturing oil gas. At that time the Cannel coal, which has been used in England for enriching coal gas, has been exceedingly expensive, and as a natural result the gas companies, one and all, have looked round very anxiously for a substitute which would enable them to bring their generally very poor coal gas to the standard required by Parliament, which was 16 cand'es for London, and 18 to 20 candles in many other cities. And they anxiously sought for a substitute which would be cheap. As a result of a visit of the then chief engineer of the Gas Light and Coke Co.—Mr. Trewby—to the United States a system has been introduced of carburetting water gas into this company's works. This system has been based on the principle of manufacturing water gas from coke, and carburetting the same gas

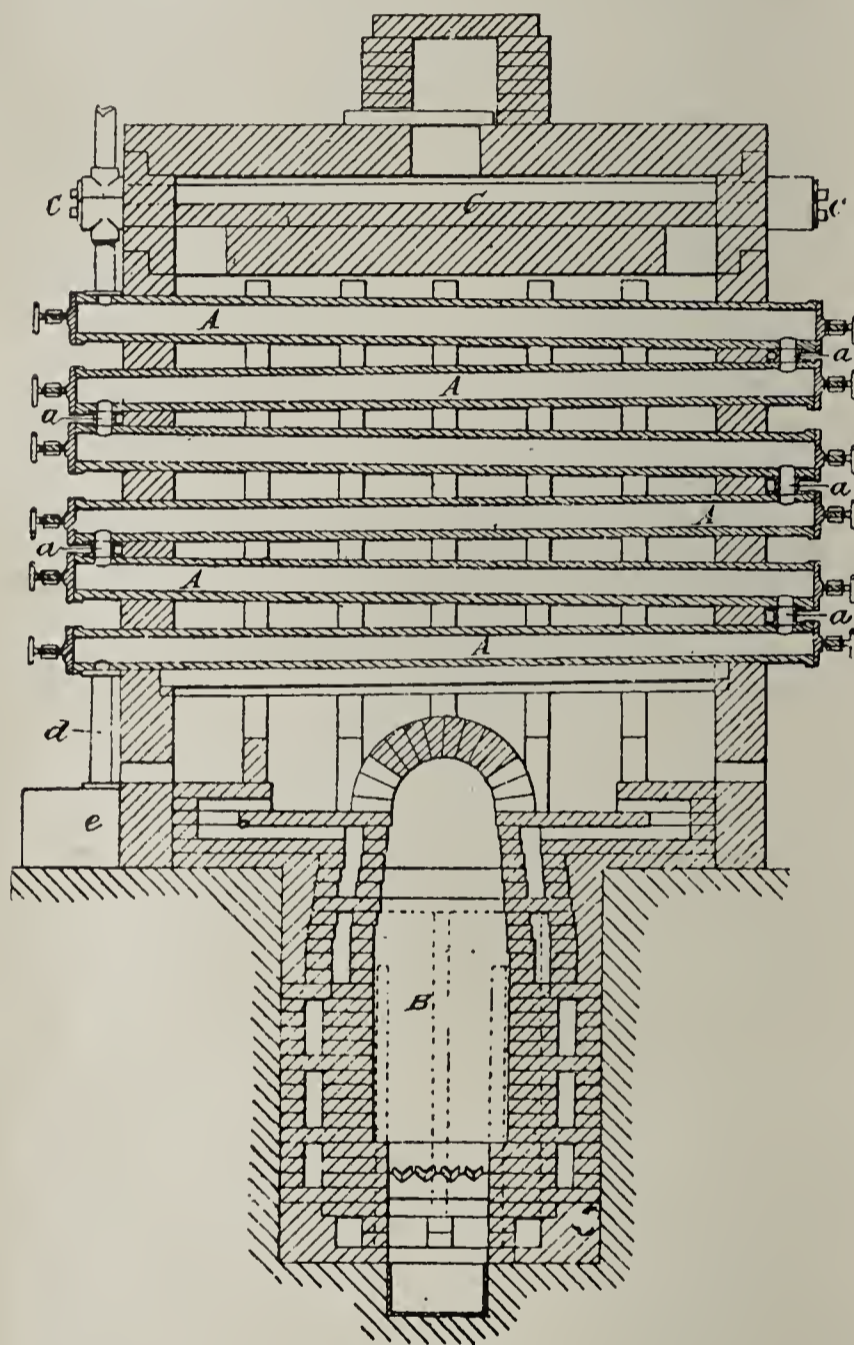


Fig 2.

by means of petroleum spirit up to 25 candle-power, and then this gas has been used for the enriching of the ordinary coal gas.

It is going back a good many years, but at that time the sole source of petroleum spirit was America, from which fields the spirit was imported into England in barrels, and naturally it came a very expensive gas enricher, the result being that the carburetted water gas plants introduced into England could not be profitably used. It occurred to me, then having obtained a heavy distillate from Novorossisk crude, to use it for the purpose of manufacturing oil gas, and to enrich the water gas with it.

Now oil gas has a candle power of from 60 to 80, and naturally this enabled the production of a much richer carburetted water gas than had been possible to do with petroleum spirit, as petroleum spirit could only be added in certain portion for above that it would deposit, whereas oil gas could be added in unlimited quantities. Having received the consent of the Gas Light and Coke Co. to carry out my experiments, I have been able, by a consumption of $4\frac{1}{2}$ gallons of heavy distillate to produce a carburetted water gas of the same candle power as could have been produced with $6\frac{1}{2}$ gallons of petroleum spirit.

with the result that since then, the gas companies by improving their superheaters, etc., to-day in England alone consumes about 60,000,000 gallons of heavy Russian and American solar oils for the purpose of enriching their gas.

In carrying out these experiments, moreover, I found that a certain quantity of tar is formed which contains 30 per cent. of benzol (C_6H_6), and this led me to the question of treating petroleum hydrocarbons in a manner by which I could ensure the maximum output of aromatic hydrocarbons from petroleum, or, if possible, the complete transformation of one into the other. For that purpose I have had to design an apparatus by which each respective group of hydrocarbons could be transformed into aromatic ones at such a temperature where the complete destruction of the petroleum hydrocarbons should be avoided as in the system of Pintsch and Young. For that purpose I have, constructed an apparatus embodying a series of D shaped retorts placed one above the other (see Fig. 1), and I introduced the respective oils at the top retort, these gradually flowing to the bottom retort with the result that the heaviest hydrocarbons to be gasified have met the highest temperature, and the lightest hydrocarbons have met the lowest temperature.

The results of the experiment made with this apparatus whereby I have produced more than 2,000,000 cubic feet of oil gas, have been as follows:—58 per cent. oil gas which contained 60 per cent. by volume of hydrocarbons of acetylene and benzol series, 42 per cent. of gas tar which contained 37 per cent. of benzol, toluol, and xylol, 15 per cent. of aromatic hydrocarbons, the character of which have not yet been investigated, and 12 per cent. hard pitch.

Now these facts, in my opinion, undoubtedly shew the possibilities of a very large industry being established, the effect of which would be to enable a considerable increase in the uses of petroleum products to be brought about. In making the experiments for the purpose of transforming petroleum hydrocarbons into aromatic series, I came across some facts which are of the greatest interest from a theoretical, and in future, possibly from a practical point of view. The heat which I have generally applied to the retorts has been something between 800° and 850° C. In case, however, where I have increased the speed of the oil into the retorts or have limited the heat, the transformation has been quite different, for there has been only 40 per cent. of oil gas formed and 60 per cent. of tar. I investigated the tar, and then found that a large portion of it consisted of hydrocarbons of a turpene character, thus shewing that the transformation of petroleum hydrocarbons into aromatic hydrocarbons which naturally takes place by splitting up a certain amount of hydrogen and thus reducing the relative proportion of hydrogen to carbon, takes place through the stage by which hydrocarbons of a turpene nature are formed. As is well known, the constituents of petroleum hydrocarbons are generally about 86 per cent. carbon and 14 per cent. hydrogen, but at the period when hydrocarbons of turpene series are formed, the carbon is 88.2 and the hydrogen 11.8, while finally by further splitting, a series of hydrocarbons of the benzol series is formed, which consist of 92.3 carbon, and 7.7 hydrogen.

Whether there is an intermediary stage between the benzol and turpene on the one side, and the turpene and petroleum hydrocarbons on the other, is a matter which yet remains to be investigated, and when this investigation is carried out, I have not the least doubt that it will result in proving that there exists other hydrocarbons of which we, as yet, know little or nothing.

I will now conclude, but I have felt that in bringing these facts before you, they will assist many investigators to pay some attention to this most interesting and at the same time important subject, while to the young investigators I would give one word of advice, and that is to carefully study these matters to which I have directed attention, for I am convinced that investigations in this respect will be of considerable benefit to the cause of science, and to the investigator should prove profitable.

American Interests in Japan.—According to a United States Consular report from Yokohama, the International Oil Co., a corporation principally owned by American capitalists has transferred its property in the Echigo province to the Nippon Petroleum Co. for \$875,000.

Railway Companies Searching for Oil.—The Southern Pacific Railway Co. is shortly to commence a programme of drilling in the property it has acquired in the Coalinga field, while the Santa Fe Oil Co., a subsidiary concern of the railway of that name, is to drill in the Midway territory, where it holds about 5,000 acres.

NOTES FROM ALL QUARTERS.



RUSSIA.

The Case Oil Trade is shewing signs of rapid decline. This is due partly to the high price of kerosene at Baku and to the falling off in demand for this article. The complete selling off of their timber by the Caspian and Black Sea Society shews that this firm has given up all intentions of re-starting their case factory. There are also indications shewing that the other case-oil firms are barely managing to exist.

Crude Oil Stocks.—The stocks of crude oil at the Baku oil fields on the 1st of June, 1907, amounted to 8,371,929 poods, and at the refineries 27,184,160 poods; in all, 35,556,089 poods, against 45,199,712 poods on the 1st May. The stocks of other products were:—Illuminating oils, 9,494,377 poods; lubricating oils, 2,544,774 poods; residuals, 78,188,362 poods; other oils, 1,067,442 poods; total of crude and products, 126,851,044 poods, against 155,050,767 poods on the 1st of May.

Batoum News.—According to a report from Batoum, dated the 9th September, the arrivals of kerosene there from Baku had again declined very considerably, barely amounting to 323,000 poods for the week. About half of this quantity belonged to the Caspian and Black Sea Society, who are receiving it both by pipe line and in tank waggons. Shipments of kerosene in bulk had increased, shewing that there is a good demand for it, and the restricted arrivals are to be explained by a shortage of supplies at Baku.

AMERICA.

Batson Oil Field Fire.—Damage estimated at \$100,000 has recently been done by fire in the east end of the Batson field. The cause of the conflagration is at present unknown.

New Pipe Line for the Standard.—The Standard Oil Co. has completed its new pipe line from Bakersfield to the Midway fields, which is to connect at the former place with the company's pipe to Point Richmond.

The Panama Pipe Line.—The pipe line across the Isthmus of Panama is now getting into thorough working order, and within a few weeks the Union Oil Co. of California will be delivering Californian crude oil in New York and other Atlantic ports for fuel purposes.

Another Fuel Contract.—Another important Californian fuel contract has been recently placed, this being by the San Pedro Salt Lake and Los Angeles railway for a total of 10,000,000 barrels of oil to be delivered over a period of five years. The average price of the oil is 41 cents per barrel, the railroad company undertaking to transport the oil from the wells.

ROUMANIA.

Oil Prices.—The price of crude in Roumania remains stationary. Offers for spot are very limited. Prices of illuminating oil and other products also remain good.

The Credit Petrolifer held their ordinary meeting on the 12th September. The accounts submitted shewed a net profit of 1,175,317 francs. At the proposal of the directors it was resolved to write off for depreciation a sum of 381,925 francs, and to distribute to the shareholders a dividend of 9 per cent. against 8 per cent. in the previous year. It was likewise resolved to increase the capital from 5,000,000 to 6,000,000 francs.

Enterprise.—The well-known boring firm, Hemrich Mayer and Co., of Nürnberg, Germany, after carrying out some trial drilling in Roumania, have now opened a branch establishment in Bucarest under the management of Mr. T. Akermann. The firm will, for the present, endeavour to sell their boring tools and materials and undertake contract boring, but ultimately they intend to manufacture their tools and machinery in Roumania.

The Vega Co.—The annual meeting of shareholders of the Vega Co. took place on the 12th September. The accounts submitted showed a gross profit for the year ended 13th April, 1907, of 821,285 francs. It was resolved to write off 240,645 francs for depreciation, 100,000 francs for renewal of plant, and 187,500 to be distributed as a 5 per cent. dividend on the paid up capital. It was further resolved to increase the capital from 3,750,000 to 5,000,000 francs.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	5-3/4
Baku Russian Petroleum ..	£750,000 Ord.	£1	3/3-3/9
.. .. .	£650,000 5 1/2% Pref	£1	5/6-6/0
Bibi-Eybat Petroleum Co. ..	.. .. .	.. .. .	5/6-6/6
Californian Oilfields	£250,000 Ord.	£1	5 1/4-5 3/8
Commonwealth Oil Co. Pref	18/- paid up (Prem.)	1 3/8-1 1/2	.. .. .
.. .. .	Def.. £1 fully paid	2-2 1/8	.. .. .
European Petroleum	£550,000 Pref.	£1	1/0-2/0
.. .. .	£550,000 Ord.	£1	0/6-1/6
.. .. .	£376,000 Deb.	£100	73-76
Russian Pet. & Liquid Fuel ..	£500,000 6 1/2% Pref.	£1	4/9 5/9
.. .. .	£600,000 Ord.	£1	3/6-4/6
Schibaieff Petroleum	£575,000 6% Pref.	£5	1 1/8-1 3/8
.. .. .	£575,000 Ord.	£1	2/6-3/6
Shell Transport & Trading ..	£2,000,000	£1	42/6-43/6
.. .. .	£1,000,000 Pref.	£10	9 3/4-10 xd
Spies Petroleum Company ..	£312,500	10s.	6/6-7/6

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Sept. 23rd.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	534	537
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	4,375	4,425
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas"	250	—	—
Naphtha Trading Co., A. I. Manta-	.. .. .	.. .. .	.. .. .
cheff & Co.	250	157	159
Neft Co.	250	—	—
Nobel Bros.	5,000	10,425	10,500
.. .. .	250	—	—
Rops and Co. V... .. .	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading	.. .. .	.. .. .	.. .. .
Co.	250	—	—
.. .. . (Second Issue)	250	—	—

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 2s. od.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 5s. od.
Burmah Oil, Ord.	£1,100,000	£1	£3 4s. od.
Do. Pref.	£250,000	£1	£1 5s. 3d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	£6 16s. 6d.
Do. 5% Pref.	£18,900	£7	£4 13s.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 18s. od.
.. .. . (17s. paid)	.. .. .	.. .. .	.. .. .
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	£12 5s. od.
Do. (17s. paid)	.. .. .	.. .. .	.. .. .
Do. 6% Cum. Pref.	£100,000	£10	£13 5s. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 16s. od.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 13s. 6d.
Do. "B" Deb...	£150,000	£100	£170

DUTCH COMPANIES.

Company	Latest Quotations (per cent.)	Florins.
Arnhemsche Petroleum Mij.	50	1,000
Aurora (Deb. 5%)	90	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	124	50
.. .. . (Deb. 4 1/2%)	100	1,000
Gaboos	2 1/4	—
Holl. Rumeensche Petroleum Mij. ..	25	1,000
Int. Rum. Pet. Mij.	91	500
Java Petroleum Mij. (Ord.)	—	1,000
.. .. . (Pref.)	—	—
Koninklyke Nederl. Pet. Mij. Shares ..	282	250-1,000
.. .. . Share certificates	275 3/4	1,000
Mœara Enim Petroleum Mij.	129	100
.. .. . 1-1,000 Oblig. 5	100	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij. ..	—	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	—	—
.. .. . (Deb. 5%)	—	—
Panolan Maatschappij Cert.	290	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	127	1,000
.. .. . (Common)	—	—
Sumatra-Palembang Petroleum Mij ..	90 3/4	500
Tarakan Petrol Mij.	40	—
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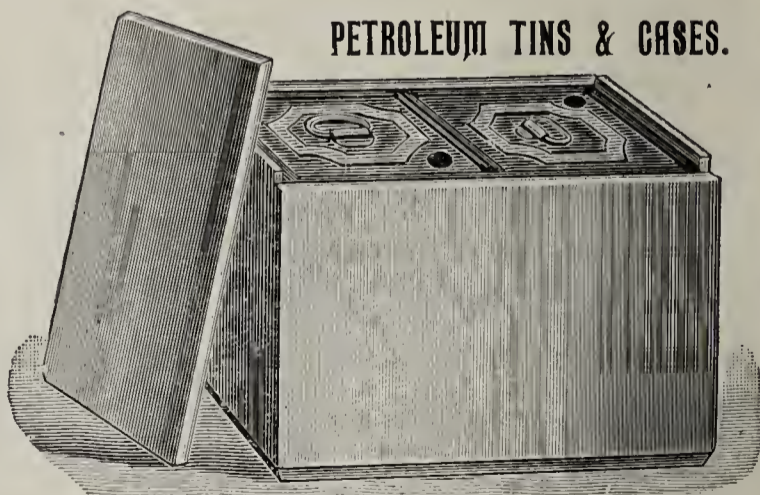
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A TREATISE ON PETROLEUM.

By SIR BOVERTON REDWOOD, D.Sc., F.R.S.

Hon. Mem. Am. Phil. Soc.; Hon. Mem. Imp. Russ. Tech. Soc.; Adviser on Petroleum to the Admiralty and Home Office; Consulting Adviser to the Corporation of London under the Petroleum Acts; Adviser on Petroleum Transport to the Thames Conservancy.

CONTENTS.—Section I.: Historical Account of the Industry.—Section II.: Geological and Geographical Distribution of Petroleum and Natural Gas.—Section III.: Chemical and Physical Properties.—Section IV.: Origin.—Section V.: The Production of Petroleum, Natural Gas and Ozokerite.—Section VI.: Refining.—Section VII.: The Shale Oil and Allied Industries.—Section VIII.: Transport, Storage and Distribution.—Section IX.: The Testing of Crude Petroleum, Petroleum and Shale Oil Products, Ozokerite and Asphalt.—Section X.: Uses of Petroleum and its Products.—Section XI.: Statutory, Municipal and other Regulations relating to the Testing, Storage and Transport.—Appendices.—Bibliography.—Index.

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SATURDAY, SEPTEMBER 28TH, 1907.

CONGRESS IMPRESSIONS.

NOW that the labours of the Third International Petroleum Congress have been completed, a number of questions have been directed to those who have participated in the work of this third international assembly as to the results achieved, and whether the sacrifice on the part of the delegates, and the considerable expense which the holding of the Congress has necessitated, has been justified.

Before giving an answer to such a question I should like to remind my readers of the fact that every progressive branch of technology and science to-day is proud of its annual congresses, which have during the past decade become established institutions of the greatest possible assistance and benefit to the various scientific or commercial branches in whose interests they are held.

As years roll on, the important rôle played by the various Congresses becomes more apparent, and the frequent interchange of ideas upon those multitudinous questions which throng the world of science, has been proved to possess a permanent value, imparting as it does a lasting benefit to the participants, while also a constant interchange of thought between members of

one branch of science or industry enables interesting study to proceed in various channels without that overlapping or that loss of time and energy which would otherwise be inevitable.

With regard to the results which from a technical point of view have been achieved by the work of Congresses, I have only to refer to the most successful annual Congresses of the Iron and Steel Institute, of the Naval architects, of the gas and the civil engineers, and the various triennial Congresses associated with several branches of trade and commerce, notable among which is the Railway Congress. Without the slightest doubt, the rapid progress which has been made in science and industry during recent years can be traced as being solely due to the benefits which have followed the dissemination of practical information at the various Congresses, attended as the gatherings are, not only by those who have made a life-long study of certain technical subjects, but by the enterprising student who is both anxious to learn and to turn his knowledge to good account.

Prior to 1900, when the first International Petroleum Congress was held, some of the problems of petroleum geology discussed very superficially at the geological congresses; the standardisation of methods for testing petroleum products has been discussed at the annual gathering of the applied chemistry Congress; but a great many subjects of the utmost interest and importance to petroleum science were not discussed at all. But during the last seven years the petroleum industry has made substantial progress, evidence of which must have impressed itself upon every delegate at the Bucarest Congress. At the first Congress at Paris as well as at the second held in Liège, there was a noticeable absence of the support of the leading industrial enterprises associated with the petroleum industry, but I am pleased to say that the Bucarest Congress was most liberally supported by many well-known industrial firms, without whose financial assistance it would have been impossible for such success to have been recorded.

There has not been a single commercial enterprise in Roumania identified with the petroleum industry, which has not most heartily co-operated in the Congress arrangements, and taken a genuine interest in the work of the Congress itself, but in addition to this—and this is a distinct indication of the progress achieved of late—many of the leading industrial organisations in Germany, Austria, France, Belgium, Hungary, Russia and Holland have also been represented.

The English interests in the petroleum industry have, to the regret of everyone, not been represented, and though this was perhaps to a certain extent counter-balanced by the fact that two most able representatives attended from the Broxburn and Pumpherston Oil Companies, as representing the shale industry of Scotland, I am sorry to find that many gentlemen associated with the petroleum industry in England have yet to learn and recognise the immense benefits arising from these international Congresses.

Each of the various sections of the Congress had most important meetings, and the papers presented were all of real value. In the section devoted to applied geology, a great deal of most valuable information has been disseminated on the question of the petroleum deposits and indications, and the natural outcome of this will be that mistakes which have in the past been unavoidable in locating petroleum wells will now be prevented, and consequently considerable amounts of money saved in the search for oil.

Then a new system of boring has been prominently brought before the Congress, which, in the opinion of many, will, in the near future, revolutionise the boring branch of the industry, giving as it does the possibility of rapid boring without those disadvantages which have been associated in the past with drilling—I refer to the passing of the oil stratum.

In the branch of petroleum refining, the investigations made by the various scientists and given to the Congress members in the papers and the subsequent discussions, will undoubtedly lead to a considerable new development in the application of petroleum products, and to demonstrate how rapidly tangible results follow an interchange of idea such as was witnessed at the Bucarest Congress, I may mention that the question of the utilisation of the naphtha acids brought before the Congress by Mr. Wischen and others, has already resulted in an enquiry being this week made by a leading soap manufacturer in England respecting the possibility of obtaining those naphtha acids for use in this country.

The success which has attended the Bucarest Congress is to a very great extent due to the untiring labours of the Roumanian Committee, which included among its members such enthusiasts as Mr. Alimanestianu, Prof. Mrazec, and Dr. Edeleanu, but the hearty support given, and the great interest taken in the Congress by the Prime Minister—Mr. Stourdza—must not be overlooked. I might here mention that Mr. Stourdza, quite three score years and ten, has been one of the first arrivals at the sectional meetings at an early hour in the morning, while on every occasion he was one of the last to leave the convivial engagements in the evening. His interest in the work of the Congress has been great; his labours in the arrangements for the comfort of the delegates have been of no mean order; and his enthusiasm which was caught up by gentlemen like the Congress President—M. Saligny—will be long remembered.

Before concluding, I would mention one or two impressions which forced themselves upon my mind during the recent Congress, and which are worthy of taking note of, lest they recur and minimise the success of future congresses. In the first place, more freedom should be given to the various national committees in regard to enlisting the sympathy and support of those who are able to represent the respective branches of the industry. A permanent interchange of ideas by means of correspondence between the committees of the different countries should be arranged, while it should also be feasible to have a meeting of delegates selected from each country, say, every six months in order to discuss those matters of importance and international interest, and to lay down a fixed basis upon which the various sections of the Congress should carry on their work. I have heard it said that it was a mistake at the recent Congress that the boring section should have been mixed up with that of pure geology. Naturally two such important and widely diversified subjects should be kept entirely separate, while it has also been felt that rather than that many questions of general interest should be discussed at sections, they might with advantage be ventilated before the meetings of the whole of the Congress members.

These, however, are matters of minor importance which are bound to be righted as time goes on. For the present, I am pleased to say that the growth in the importance of the petroleum industry is now reflected in the Congress movement, and though it may not as yet be apparent to all, time will certainly prove that these international gatherings not only justify their existence, but return tenfold the labour and expense which they necessitate.

P. DVORKOVITZ.

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR JULY.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during July were as under:—

	1906. Quantities. Gallons.	1907. Quantities. Gallons.
CRUDE—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	—	—
New York	7,071	—
Philadelphia	5,567,370	8,295,340
Galveston and Sabine	—	—
Total	5,574,441	8,295,340
Total value for the month, 1906	—	\$343,098
" " " 1907	—	\$487,887
NAPHTHAS—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	—	—
New York	1,476,058	1,686,505
Philadelphia	9,000	402,178
Galveston	—	—
Total	1,485,058	2,088,683
Total value for the month, 1906	—	\$149,852
" " " 1907	—	\$248,212
ILLUMINATING—		
Baltimore	3,487	82
Boston and Charlestown	59,119	74,488
Delaware	—	—
New York	38,905,431	47,081,649
Philadelphia	27,677,670	30,389,524
Galveston	1,267,058	—
Total	67,912,765	77,545,743
Total value for the month, 1906	—	\$4,413,101
" " " 1907	—	\$5,412,655
LUBRICATING—		
Baltimore	395,003	485,300
Boston and Charlestown	17,675	34,764
Delaware	—	—
New York	5,101,544	8,981,828
Philadelphia	2,464,567	7,775,203
Galveston	35,000	1,025,453
Total	8,013,789	16,302,548
Total value for the month, 1906	—	\$996,657
" " " 1907	—	\$1,872,121
RESIDUUM—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	—	—
New York	3,669,350	—
Philadelphia	80,625	3,168,484
Galveston	1,242,300	2,112,563
Total	4,992,275	5,281,047
Total value for the month, 1906	—	\$145,687
" " " 1907	—	\$173,467
TOTAL MINERAL OILS—		
Baltimore	398,490	485,382
Boston and Charlestown	76,794	109,252
Delaware	—	—
New York	49,159,454	57,749,982
Philadelphia	35,799,232	48,030,729
Galveston	2,544,358	3,138,016
Total	87,978,328	109,513,361
Total value for the month, 1906	—	\$6,045,405
" " " 1907	—	\$8,194,342

A RECORD GAS WELL IN THE TILBURY FIELD.

To the Tilbury field of Canada belongs the credit of now possessing one of the largest, if not the largest, gas well in America. The well is of 10,000,000 cubic feet capacity, and thus twice the size of the large well supplying Chatham with its natural gas. It is on Jackson's farm, and is operated by the Leamington Gas and Oil Co., of Leamington, and is in the South Glenwood district, which so far has shewn up as an immense

oil and gas belt, sufficiently so to prove an indefinite supply of gas for the whole of south-western Ontario. Gas was struck at 1,350 feet, when the tools were lost in the hole, including the whole length of cable rope. On account of this accident a most interesting phenomenon, says the special correspondent of the *Oil, Paint and Drug Reporter*, is occurring. The gas flow from the hole is so strong that several hundred feet of cable flutter upright in the hole, fiercely fluttering like a flag in a windstorm. The cable is being slowly torn to shreds, which fly from the hole as high as the derrick, when they are scattered about. The fact that such an immense gas well has materialised in this district, where there are already a number of smaller gassers, has attracted intense interest. It will be noted that the depth so far drilled—1,350 feet—is 70 feet less than the usual depth. This is due to the fact that on account of the immense gas flow drilling could not be continued to a greater depth; indeed, the sudden gas flow was primarily the cause of the tools being lost.

AUGUST DEVELOPMENTS IN THE PENNSYLVANIAN FIELDS.

The developments in the Pennsylvanian fields during August resulted in a general decline in the number of wells completed and also in new production. The total decrease of completed wells as compared with the figures for the preceding month was 74, and that of the production 12,850 barrels, while in dry holes there was also a slight decrease.

Of the total new production during the month about 70 per cent. came from the new oil districts west of the Mississippi river, the production here being over 40,000 barrels. The Illinois territories were credited with about 20 per cent. of the remainder, and the outstanding 9 per cent. came from the older territories of Ohio, West Virginia, etc.

It will be seen from the above that the new production of Illinois is again on the decline, but to a great extent this is brought about on the part of the operators themselves who shew a desire to curtail operations wherever possible. Many of the wells are shut down, for great as have been the efforts put forth to care for the production, and see to its facilities for transport, these arrangements are to-day absolutely inadequate. In fact, the general opinion is that the production would quickly double if there were ample facilities for transport, and if the drill were unrestricted. But everything possible is being done in the way of pushing forward work for the increasing of the transport facilities, and for August the pipe line runs were the largest on record.

Matters are quickly righting themselves in the fields west of the Mississippi river—we refer to the Mid-Continental fields—and facilities are being put in working order to take care of the enormous production. During the month the new production fell below the figures for July, yet it reached over 40,000 barrels.

From the percentage given above of the yield of new production from the older Pennsylvanian fields, it will be seen that these territories are decreasing in their yield, while in the amount of drilling now proceeding, the same remark applies. For the present, at all events, it appears that operators are inclined to turn their attention to the more prolific territories of the west where a good production can be assured, the only difficulty being the lack of transportation facilities.

THE SAFETY NON-EXPLOSIVE RESERVOIR COMPANY, LIMITED.

INTERESTING DEMONSTRATIONS.

Following upon the recent successful experiments carried out by the British Fire Prevention Committee with regard to the use of the safety devices in order to render tanks and vessels containing petrol or other highly inflammable liquids non-explosive, a series of most interesting demonstrations was given on Wednesday by the Safety Non-Explosive Reservoir Co., Ltd., to a large gathering of members of the press, as well as several gentlemen representing Government departments, at the testing station of the British Fire Prevention Committee.

The various experiments were conducted by Colonel N. Willoughby Wallace, one of the company's officials, and all were most successful as proving the efficacy of the safety devices in entirely overcoming the danger of explosion of any kind in receptacles used for inflammable liquids. The majority of the experiments were made with cylindrical vessels protected with safety devices. These various vessels were filled with petrol, a safety plug held in place by fusible solder being fixed at the top. In every case a large bonfire was lighted underneath the tanks, the heat becoming so great that the generated gases blew off the plug. The flames then leapt round the top of the drum, and the escaping gases caught fire in much the same way as a flame from an

unprotected gas pipe. A damp cloth, however, applied to the aperture in the tank was sufficient to extinguish the flame.

The last demonstration was mainly with cylindrical tanks containing petrol, but not protected with safety devices, and the explosions which occurred shortly after lighting the bonfire, were sufficient to demonstrate that though petrol is a very good servant, it is also, when not properly handled, a very bad master.

It may here be mentioned that the safety devices used in the tanks are on the principle of the wire gauze cylinders in Davy lamps. In the vessels tested the metal plugs varied in diameter from $\frac{3}{4}$ -inch to 4-inch, and comprised pieces of metal of varying gauge inserted into the screwed metal stoppers of the vessel, and held in place by fusible solder. The interior safety tubes were fitted to all openings of the protected vessels, comprising in each case one wire-gauze tube (the gauze being from 42 to 21 meshes per lineal inch) and two perforated cylinders of metal having about 12 perforations of about $\frac{1}{8}$ -inch diameter to the square inch. The tubes, which were screwed to the principal filling openings, extended to the bottom of the vessels, the other openings being fitted with gauze only.

In Germany the use of such safety devices is already compulsory, and it is little less than remarkable that they have not long ago been in general use in this country, especially in the supply tanks of motor cars, where the risk of fire is always present.

THE OPERATIONS OF THE BAKU REFINERIES.

STATISTICS FOR MARCH, 1907 (in poods).

I.—MANUFACTURE OF ILLUMINATING OILS.

Distillation.

			Submitted to Distillation.			Products Received.				
			Crude.	Other Products.	Total.	Kerosene.	Residuals.	Other Products.	Loss.	Fuel used.
March	..	..	23 330,742	286,213	22,616.955	6,211,332	14,744,304	1,070 692	572,627	649,485

Refining.

			Submitted to Refining.			Refined Product ^{as} Obtained.			Loss in Refining.	Chemicals used.	
			Kerosene	Other Distillates.	Total.	Kerosene'	Other Products.	Total.		Acid.	Soda.
March	..	..	5,983,542	116,936	6,100,478	5,853,019	103,435	5,956,154	144,314	39,684	13,553

II.—MANUFACTURE OF LUBRICATING OILS.

Distillates Received.

		Machine Oil.	Spindle Oil.	Cylinder Oil.	Goudron.	Solar Distillates.	Residuals.	Other Distillates.	Loss in Distilling.	Fuel used.
March	.. ..	843,140	90,266	41,321	1,463,096	1,030,954	194,256	13,694	113,419	453,597

Refined Products Received.

											Chemicals used.			
											Acid.		Soda.	
				Spindle Oil.		Machine Oil.		Cylinder Oil.		Loss in Refining.				
March	107,387	..	789,813	..	33,640	..	109,535	..	29,083	..	3,673

The output of benzine distillates amounted to 50,072 poods. The output of refined benzine was 31,035 poods.

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MISCELLANEA.

ANOTHER ENGLISH COMPANY FOR THE CALIFORNIAN FIELDS.

The latest English company to enter the Californian fields will be known as the Pacific Oilfields, Ltd. It was registered on September 14th with a capital of £250,000, in £1 shares. The object of the new company is to acquire about 5,876 acres of land in the counties of Santa Barbara and San Luis Obispo, California, to adopt an agreement with the Balfour-Guthrie Investment Co. (incorporated in California), and to carry on the business of producers, refiners, storers, suppliers, and distributors of petroleum and its products, etc. The signatories, who include a number of well-known oil men, are:—Messrs. R. B. Forman, High Pastures, Mossley Hill, Liverpool; A. B. Williamson (Balfour, Williamson and Co.), 6, Crosby Square, E.C.; T. Royden, 20, Brown's Buildings, Exchange, Liverpool; C. H. Moore, 22, Ryder Street, St. James's, S.W.; W. Mackenzie, 22, Meadows, Dundee; R. Balfour, 6, Crosby Square, E.C.; A. Guthrie, 3, Fenwick Street, Liverpool (1,000 each). Minimum cash subscription, 10 per cent. of shares offered to public. First directors (not less than three nor more than five): R. B. Forman, A. B. Williamson, T. Royden, C. H. Moore, and W. Mackenzie. £1,000. £200 each per annum (chairman £100 extra).

FROM THE MID-CONTINENT FIELDS TO THE GULF COAST.

TWO TRUNK PIPE LINES NOW COMPLETED.

In our last issue we made the announcement of the completion of the new trunk pipe line owned by the Gulf Pipe Line Co., which has been laid to connect the Mid-Continent field with the Gulf Coast. It is very interesting now to record the completion of the trunk line belonging to the Texas Co. which runs from Tulsa to Humble. Both these lines will shortly be in full working order, bringing their constant streams of Mid-Continent oil to the refineries on the Gulf Coast, which are in great need for new supplies in consequence of the steady decrease in the production of the Gulf Coast fields.

NORTH CAUCASIAN OILFIELDS, LIMITED.

A SUCCESSFUL ENGLISH CONCERN ABOUT WHICH LITTLE IS KNOWN.

In the latest issue of the *Viestnik Finansov*, the organ of the Russian Ministry of Finance, we find particulars taken from the balance sheet for 1906 of the North Caucasian Oilfields, Ltd., an English company having its registered office in Newcastle-on-Tyne, and owning a petroleum property in Grosny.

The company's revenue from the sale of crude oil, etc., in 1906 amounted to 220,025 roubles. The total expenditure on exploitation and management amounted to 127,290 roubles, leaving a net profit of 92,936 roubles.

The company's chief assets on the 31st December,

1906, were: Property and installations at Grosny, 802,558 roubles; materials and casing, 41,950 roubles; crude oil in stock, 31,651 roubles; cash in hand, 47,490 roubles; sundry debtors, 385,100 roubles; balance of initial cost of organisation not yet written off, 62,455 roubles; interim dividend paid out, 21,255 roubles. The chief items among the liabilities are: Paid up capital, 105,550 shares of £1 each, 998,503 roubles; sundry creditors, 199,921 roubles; depreciation fund, 105,880 roubles. The balance-sheet is signed by two directors (Mr. F. Straker and Mr. E. Sisterson) and the secretary (Mr. A. D. Stewart).

At the general meeting of shareholders held at Newcastle-on-Tyne, the balance sheet was adopted, and it was resolved to distribute a dividend of 1s. 10d. per £1 share, or about 9.17 per cent., which takes up 91,529 roubles, whilst a sum of 2,855 roubles is carried forward to this year's account.

BAKU PRODUCTION DURING AUGUST.

The total production of crude oil at the Baku oil fields during August, according to telegraphic reports from Baku, amounted to 39,375,838 poods, of which 11,759,733 poods were produced at Bebe-Aibat. During the month spouters yielded 713,377 poods at Bebe-Aibat, and 31,477 poods at Balakhany.

The production of the leading firms was as under:—

	Poods.
Nobel Bros.	6,000,000
Caspian and Black Sea Society	3,000,000
Baku Naphtha Co.	2,300,000
Mantascheff and Co.	2,300,000
Russian Naphtha Co.	1,300,000
Mirzoeff Bros.	1,200,000
Schibaieff Petroleum Co., Ltd.	1,200,000
Moscow-Caucasian Co.	1,100,000
Aramazd Co.	1,000,000
Baku Russian Petroleum Co., Ltd.	1,000,000
Naftalan Co.	1,000,000
Bibi-Eybat Petroleum Co., Ltd.	1,000,000
Zoubaloff	900,000
Pitoeff and Co.	900,000
Nagieff	900,000
Neft Co.	700,000
Caspian Society	600,000
European Petroleum Co., Ltd.	500,000
Assadulaeff	500,000
Benkendorf and Co.	500,000
Tiflis Co.	500,000

THE COMMONWEALTH OIL CORPORATION.

Important information has been received with regard to the Commonwealth Oil Corporation's shale properties in the Capertee and Wolgan Valleys. It appears that when Sir William Lyne was in London he informed Sir George Newnes that he intended to personally inspect the above properties. Although the ex-Premier has taken over the duties of Chancellor of the Exchequer to the Australian Commonwealth, he has made the promised inspection, and has just cabled to Sir George Newnes. Sir William is satisfied with the thickness of the shale seams in both the Capertee and the Wolgan Valleys. He says in one of the tunnels on the Capertee side the shale is continuous for two-thirds of a mile, is 4 feet 2 inches to 4 feet 6 inches in thickness, and of very good quality, whilst in one of the Wolgan tunnels it is 16 to 20 inches of good quality and increasing in thickness. When in this country Sir William Lyne made the remark that if the seam of shale of the quality attested was one foot thick, it would be mining money to work it.

THE OIL AND GAS FIELDS OF ONTARIO.

The production of petroleum and natural gas in Ontario, and the conditions and recent developments of the fields, are the subjects of a paper by Eugene Coste in the report of the Ontario Bureau of Mines, just issued. The production of both oil and gas shewed a marked increase in 1906, recent fields becoming considerably enlarged and more productive. In the case of the oil the Leamington field of Essex county, and the Moore field of Lambton county, account for most of the increase, while the gain in natural gas production is due to the opening of new pools in Welland and Haldimand counties, from which several cities are now supplied. From the figures supplied by a number of big logs of deep wells which are given, Mr. Coste draws the conclusion that, from Osprey township in Grey county to Lambton county, the strata dip more or less uniformly in a south-west direction; but continuing further in the same direction, they again rise more or less gradually. It is, therefore, demonstrated that the Lambton county oil fields are really in the bottom of a broad, deep syncline, instead of being on the Cincinnati anticline, as is often contended. New records of the wells in the Niagara peninsula adduced, as well as other previously published, shew that the strata of that peninsula have a more or less constant dip to the south-south-east. As the gas fields of Welland and Haldimand counties are on the flank of that long slope, which continues to the south across Lake Erie into New York and Pennsylvania and also to the north across Lake Ontario, it is to be seen that the famous anticlinal theory of oil and gas production is far from being supported by the facts either in the gas field of the Niagara peninsula or in the oil fields of Lambton county. Disturbances and faults exists in these fields, sometimes bringing up the strata locally in blocks, terraces, or sharp folds, but the more or less broad anticlines, which the supporters of the theory of the organic origin of oil and gas regard as necessary to the large accumulation of those products, are conspicuously absent.

Another result of the drilling recorded in the logs is

that both oil and gas have been found in the lower part of the Trenton and right on top of the Archean formation, which cannot be explained by any other view of the origin of oil and gas than that of volcanic emanations from below, as held by the French school of geology. The practical bearing of this conclusion upon the oil and gas industry is important. In planning future developments in Ontario it is of consequence to know that oil and gas may be looked for in large quantities just as well under the Petrolia oil rock—the corniferous limestone—as in or above it; and therefore drilling along the fissured oil belts which traverse Ontario, in exactly the same manner as they traverse Pennsylvania, Ohio, and Indiana, will develop similar fields of oil and gas. In support of his conclusion, Mr. Coste adduces the facts that in the Leamington oil field the oil comes from the Guelph limestone, a stratum 1,500 feet below the corniferous, and that the gas fields of Welland and Haldimand derive their supplies from the Clinton, Medina and Trenton, which are still lower strata. Latest advices state that the oil production from the Tilbury field is holding up, notwithstanding that a number of drilling and pumping rigs had to shut down on account of a scarcity of water. In the shallow field only two wells are running owing to the water famine. During the month of July about 38,000 barrels of oil were shipped from the field to the refinery at Sarnia. Two gas lines are being laid to the Shallow field, and when these are completed, which is only a matter of days, operations will be resumed on a large scale there. The Kennedy Oil and Gas Co. brought in a great well on the Crosby farm, Tilbury East, recently. It is making over 200 barrels of oil a day.

An Important Californian Company. — The Associated Pipe Line Co. is the title of a concern recently registered in California with a capital stock of \$7,000,000. This company is to construct an 8-inch pipe line between Bakersfield and the Carquinez Straits, the work on this having already been commenced. This new line is to transport the heavy oils such as that of the Kern River field by running water into the line at the same time, thus keeping the oil from coming into contact with the pipe to any great extent. The interior of the pipe is of a corrugated nature, and when a pressure is placed upon the water, the whole flow in the pipe revolves. Then a stream of the heavy oil is forced under pressure at the centre, and this keeps in its central position throughout the pipe.

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THE RUSSIAN PETROLEUM AND LIQUID COMPANY.

THE CAUSE FOR AGITATION IN A NUTSHELL.

Mr. W. Henry Burke, Chairman of the Shareholders' Committee in connection with the agitation now being waged against the directorate of the Russian Petroleum and Liquid Fuel Co., Ltd., has issued a circular, which pointedly sums up the case of the shareholders. It is as follows:—

You will no doubt have seen in the papers a report of the preference shareholders' meeting, convened by the directors, and held at Winchester House, E.C., on 27th August.

May we, as fellow shareholders, ask you to support us in demanding an independent investigation into the management of the company's affairs? We believe that an immediate alteration is not only advisable but absolutely necessary.

The dividends in the last few years have fallen from 50 per cent. to nil, and on last year's trading there has been a loss of over £70,000. A few years ago a distinct change was made in the management, and since that time the prosperity of the company has steadily declined.

The present directors have attempted to explain the disastrous position of the company by attributing it to the riots and political unrest in Russia; they ignore the fact that the mischief began long before the troublous times, and that other Russian companies at Baku, under the same conditions, have made large profits during the last three years.

It appears to us that the company's downfall is due, in a large measure, to the altered mode of constructing and working the wells, with the result that the property, which is regarded by experts as one of the best oil-producing properties in the world, is now to a very large extent producing water instead of oil, and further, the company has not realised anything approaching the Baku market prices for their oil.

We have reason to believe that the unrest amongst the workers has been accentuated by the changed mode of dealing with the men; we are also of opinion that the company's business can be made very profitable. Under the former management the price of oil was low,

but good dividends were paid. From 1904 the average price of oil has been abnormally high; notwithstanding this, a serious loss has been incurred in 1905-1906, other companies at Baku having during the same period paid large dividends. Is it not time to enquire why this is not the case with the Russian Petroleum and Liquid Fuel Co.?

Finally, we may say that the object of the present movement is obviously in the interest of all shareholders; we therefore confidently hope that you will be good enough to support us, so that no means may be lost to restore the company to its former conditions of prosperity.

The circular is signed by the following gentlemen:— F. Andrew, Sir Percy Bates, Bart., Chas Benn, J. D. Birchall, Sir Thomas Birkin, Bart., Chas. W. Birkin, Wm. Henry Burke, J. H. Fothergill, Jas. Hutchinson, Saml. Johnson, F. Shaw-Kennedy, A. L. Lever, M.P., A. L. Liberty, D.L., J.P.; N. McLean, W. H. Morton, F. Gelderd-Somervell, J. H. Thornhill, Alf. Whitaker, Jas. Whitaker, Jun., and J. B. Worthington.

The above gentlemen hold in the aggregate over 40,000 shares, each holding not less than 1,000 shares, and they are supported by other shareholders holding in addition over 45,000 shares. At a different period of the year, Mr. Burke adds, and had time permitted, the committee are persuaded the figures would have been much larger.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended September 14th, was 288,000 poods, or 4,643 tons; and for the week ended September 21st was 278,000 poods, or 4 482 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended September 15th was 207,000 poods, or 3,337 tons; and for the week ended September 22nd was 221,000 poods, or 3,563 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 15th September was 152,540 poods, or 2,460 tons; and for the week ended 22nd September, 143,820 poods, or 2,319 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 15th September was 120,517 poods, or 1,943 tons; and for the week ended 22nd September was 123,246 poods, or 1,987 tons.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO SEPTEMBER 23rd, 1907.

IN GALLONS.

[ALL RIGHTS RESERVED.]

COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Sept. 9.	From Jan. 1.	Since Sept. 9.	From Jan. 1.	Since Sept. 9.	From Jan. 1.	Since Sept. 9.	From Jan. 1.	Since Sept. 9.	From Jan. 1.	Since Sept. 9.	From Jan. 1.	Since Sept. 9.	From Jan. 1.	Since Sept. 9.	From Jan. 1.
Austria ...	—	—	4,040	73,580	—	67,770	—	—	—	—	—	—	—	—	4,040	141,350
Belgium ...	—	153,410	65,250	537,255	—	—	—	310	—	4,000	—	—	—	860	65,250	695,835
Canada ...	—	—	—	—	—	4,800	—	—	—	—	—	—	—	—	—	4,800
Dutch India.	—	—	—	—	—	—	—	—	1,386,900	19,670,290	—	—	—	—	1,386,900	19,670,290
Germany ...	25,270	1,261,055	58,980	1,103,300	—	2,000	—	—	—	80	—	—	—	4,100	84,250	2,370,535
Holland ...	—	1,070	1,570	12,240	—	—	—	—	40,050	492,180	—	—	2,400	99,970	44,000	605,460
Roumania ...	—	5,744,090	—	—	—	—	5 159,590	—	—	1,459,000	—	238,700	—	—	—	12,601,380
Russia ...	3,001,040	26,263,600	862,930	3,117,630	125,960	125,960	—	897,040	960	12,690	—	—	1,423,780	3,990,890	31,830,700	—
U.S.A. ...	5,575,390	74,541,930	1,596 970	29,530,875	274,950	854,660	5,891,310	39,416,560	—	3,456,100	545,100	4,657,570	157,510	1,142,200	14,041,230	153 599.895
Other Countries	—	950	240	58,385	4,760	4,760	—	—	—	2,500	—	40	—	117,790	5,000	184,425
	8,601,700	107,966,105	2,589,980	34,433,265	405,670	1,059,950	5,891,310	45,463,500	1,427,910	25,096,840	545,100	4,896,310	159,910	2,788,700	19,621,580	221,704,670

THE PETROLEUM TRADE OF BAKU.

A REVIEW OF THE FIRST HALF OF 1907.

According to the statistics published by the Excise Department, the deliveries of petroleum products from the Baku refinery region in the first half of this year amounted to 164,600,000 poods, against 170,900,000 poods for the corresponding period of 1906. Thus there was a slight decline in deliveries, which is due to the fact that the Caspian tank fleet, owing to the strike of the crews, did not commence operations until the end of April, which means a loss of one and a-half months in the busiest part of the season. If it were not for this, the deliveries would surely shew a substantial increase. Thus, for instance, in June last year the deliveries were only 42,800,000 poods, whilst in June this year they rose to 57,200,000 poods. The shipments by sea were 52,300,000 poods, against 37,000,000 poods in June, 1906.

Taking the various classes of products separately, we find that the deliveries of kerosene during the half-year were 40,900,000 poods, as against 33,800,000 poods in the first half of 1906. This increase is due solely to the increased exports of kerosene to foreign markets; thus the delivery of kerosene to Batoum, the shipments from which, with but few exceptions, are for foreign markets, amounted to 16,500,000 poods against 9,100,000 poods in the first half of 1906. This shews an improvement in the condition of the export trade in kerosene. The same is to be noted in the figures of the deliveries by sea of illuminating oils to the port of Petrovsk on the way to Novorossisk for export, which amounted to 2,400,000 poods, against 800,000 poods in the first half of 1906. On the other hand, shipments to Astrakhan shew a slight decline, 19,900,000 poods against 21,200,000 poods, which is easily explained by the strike in the early part of the navigation season.

There is a slight decrease in the deliveries of lubricating oils, 6,300,000 against 7,800,000 poods, which, however, has no significance. The deliveries of residuals were 98,000,000 against 110,400,000 poods. As residuals are, with slight exceptions, shipped by sea to the markets of the interior, the late starting of the navigation has its greatest effect on this product. There can be no doubt, however, that by the 1st of August the shipments of residuals will have exceeded those for the corresponding period of 1906, since in June there were shipped 40,400,000 poods against 27,800,000 poods in June, 1906.

The shipments of crude oil for the half year amounted to 16,500,000 poods as against 17,800,000 poods in the corresponding half of 1906. This includes shipments of crude oil to Astrakhan of only 7,800,000 poods as against 13,000,000 poods in the first half of 1906. These figures shew that crude oil is now used chiefly for oil engines and for refining purposes, and is not, as was formerly the case, added to the residuals for fuel purposes. This is also confirmed by the conditions of the market and the relative valuation of the various products. The price of kerosene stands high and its stocks are limited, and consequently crude oil is dear whilst residuals are cheaper.

The deliveries of other products amounted to 2,700,000 poods against 1,000,000 in the first half of 1906. Generally, it may be said that the deliveries of oils from Baku are proceeding under normal conditions, the tank fleet is worked at a forced rate, and the export of oils to foreign markets is improving.

OPERATIONS OF SEVERAL RUSSIAN PETROLEUM COMPANIES DURING 1906.

The Sunik Petroleum Co., owning a property in the Baku oil fields, in 1905—their fifth financial year—incurred a loss of 1,966 roubles, which brings the total loss to date up to 213,428 roubles. The nominal capital is 2,100,000 roubles. There are creditors to the extent of 617,767 roubles.

Messrs. N. N. Sokoloff and Co., shipowners and petroleum merchants, of Astrakhan, during last year had a revenue of 588,637 roubles, which left a loss of 119,379 roubles. Added to last year's loss the total loss to date now amounts to 181,674 roubles. The nominal capital is 600,000 roubles; creditors, 175,961 roubles; and debtors, 16,379 roubles.

The Astrakhan Petroleum Co., owning a property at Saboontchi, has, in its first financial year of 1906, incurred a loss of 2,612 roubles, which brings the total loss to date up to 100,179 roubles. The nominal capital is 1,000,000 roubles; creditors exceed debtors by 46,167 roubles.

Messrs. Merkulieff Bros., shipowners and petroleum merchants, with head offices in Astrakhan and numerous branches in Russia, in 1906 realised from the transport of petroleum products a sum of 472,716 roubles, and by the sale of petroleum products 116,947 roubles, making a total revenue of 589,663 roubles. The expenditure amounted to 477,893 roubles, leaving a profit of 111,770 roubles. Of this sum 51,776 roubles were written off for depreciation, and 51,200 roubles distributed as dividend. The original share capital is 400,000 roubles, whilst a further sum of 803,752 roubles has been subscribed for extending the business. On 1st January, 1907, the company had bills out for 1,641,563 roubles, and sundry creditors were 1,121,610 roubles. The assets included: Cash in hand and at bankers, 681,686 roubles; bills receivable, 511,767 roubles; sundry debtors, 1,476,818 roubles; landed and other property, 1,232,274 roubles.

BATOU PETROLEUM SHIPMENTS.

The following are the figures of the shipments of petroleum products from Batoum during the week ended September 1st, 1907, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1906.	1907.	1906.	1907.
To Europe ..	—	886,000	196,000	15,000
To the East ..	247,000	246,000	—	189,000
To Russian Ports.	215,000	1,000	9,000	2,000
From 1st Jan. to 1st Sept. :—				
To Europe ..	9,361,000	12,268,000	5,674,000	6,962,000
To the East ..	4,818,000	7,664,000	43,000	313,000
To Russian Ports	2,257,000	1,575,000	175,000	136,000

THE OIL FIELDS OF SOUTHERN CALIFORNIA.



Another Important Monograph.

Some few months ago we published abstracts from two monographs which had been compiled by the representatives of the United States Geological Survey upon the oil districts of Southern California, and now we are enabled to give the final monograph, which has been recently issued in pamphlet form, and which deals with the districts known as the Santa Clara valley.

The article has been written by Mr. G. H. Eldridge, and embodies data which has in the past been unattainable. From this fact alone the article should be of considerable future interest. Mr. Eldridge points out that the Santa Clara valley of Southern California is a structural depression modified by erosion. The heads of the valley lie in the San Gabriel Range and in the mountains to the north, which connect this range with other portions of the Coast Range and with the Sierras. After a westerly course of 75 miles the stream which drains the valley enters the Pacific a little south of the town of Ventura. The valley proper is given over to agriculture, but in the mountains on either side are many important oil fields.

The mountains north of the valley form the watershed between it and the Central Valley of California, and also present a barrier to the Mohave Desert, which lies in the angle between the Sierras and the more southerly ranges of the State. These mountains are excessively rugged and represent the convergence of several ranges, which to the north-west maintain a conspicuous individuality. Pine Mountain, which is 7,488 feet in altitude, is their culminating point. The area thus occupied forms a part of the Santa Barbara Forest Reserve, recently set aside by the United States Government. The greater portion of it is accessible only by trail and is almost wholly uninhabited.

Oil Fields North of the Santa Clara.

The oil fields north of Santa Clara river involve an area having an east-west length of 35 miles and a width of seven to 15 miles. For convenience of discussion, this area may be divided into the Ojai Valley, Sulphur Mountain, Silver Thread or Sisar Creek, Santa Paula Ridge, Sespe, Pole Canyon and Hopper-Piru fields.

Ojai Valley Fields.

The Ojai Valley fields comprise the region of the upper and lower valleys, lying between the Topatopa Range on the north and Sulphur Mountain on the south. Nordho, the only town within the district, lies about 15 miles north of Ventura, with which it is connected by a spur track of the Southern Pacific Co., and 12 miles north-west of Santa Paula.

The oil wells in the Ojai fields comprise those of the Union Oil Co. on the Pirie ranch, at the west end of Lion Hill; two in Lion Canyon, about one and a-half miles south-east of the Pirie wells; a couple drilled by Langdell, Newmark and Roan, near the summit on the north slope of Sulphur Mountain, and a group along the north-eastern side of the Upper Ojai, sunk by the Widden-Double, Sobra Vista, and Santa Paula oil companies.

Southern Sulphur Mountain Field.

The oil areas that have been developed along the southern base of Sulphur Mountain lie at the heads of Aliso, Wheeler, Salt Marsh and Adams Canyons, and along the short gulch heading against Adams Canyon from the Santa Paula valley. All are a short distance south of the northern boundary of what once constituted the San Buenaventura Mission. The general elevation of these areas is about 1,000 feet, Sulphur Mountain rising abruptly above to heights between 2,500 and 2,750 feet. The canyons are of easy grade and the intervening ridges are comparatively low.

The line of the suspected fault along the south side of Sulphur Mountain is marked in the several canyons by many strong seepages of petroleum, and in proximity to the fracture, in the northward dipping or more severely crumpled strata of the Fernando formation, most if not all of the wells of this general field are drilled. Those yielding the lighter oil, however, may penetrate to minor sands in the Modelo, or they may be peculiar to the brown shale of uncertain though perhaps Modelo age. The heavier oil, without doubt, occurs in the Fernando formation.

The wells in the field under discussion have been drilled at the heads of Aliso, Wheeler, Salt Marsh and Adams Canyons and along the bottom of a short gulch east of Adams Canyon. But little new development was under way at the time of the investigation, and it was difficult to obtain data relating to the occurrence of the petroleum. Furthermore, many of the wells were old and were abandoned, while the product of others was reduced to only one or two barrels a day. The initial flow of some of the wells appears to have been as high as 25 to 50 barrels. The depth as a rule ranges between 150 and 500 feet, but here and there 1,800 or 2,000 feet is said to have been attained. An early mode of recovering the oil was by tunnels, many of which penetrate the shale of Sulphur Mountain. From these a small amount of oil still seeps, although several barrels a day have been obtained.

Two varieties of oil occur in this field—one black, with a gravity of 19° to 30° B.; the other green, with a gravity of 30° to 32° B. The lighter oil, as already stated, is believed to be associated with the shale doubtfully assigned to the modelo formation. It occurs nearer the base of the mountain than the black and heavy oil. The comparatively shallow depth of certain of the wells yielding green oil and their location well up the slopes of Sulphur Mountain suggest the possibility that the productive beds outcrop in the base of the mountain. None of the strata, however, so far as the writer could learn, shewed any indication of containing petroleum.

The duration of life of the wells varies. Two years seems to be the maximum for the larger yields, but beyond this time the product dwindles to one or two barrels a day, and there remains constant for an indefinite time. This constancy, coupled with the inexpensiveness of pumping, accounts for their still remaining in service. The earliest drilling reported in this field was done by Mr. Adams 25 years ago in Adams Canyon. This well and another in proximity, put down by the Union Oil Co., afforded a light oil, and a similar product was obtained by wells in Salt Marsh Canyon. Periodic attempts have been made to develop the source from which this supply was derived, but without success.

Silver Thread or Sisar Creek Field.

The Silver Thread field is developed on the high ground immediately north of Sisar Creek, near its confluence with Santa Paula Creek, directly opposite the productive territory east of the latter stream.

The oil wells of this district all lie immediately north of the Silver Thread fault, which separates the Modelo shale and the Sespe red beds. They pierce the red beds, and a few wells in their upper portions pass through the more southerly members of the older, but overlying rusty, beds that carry eocene fossils. None of the wells is distant more than 200 or 300 feet from the plane of fracture, while one or two are especially close to it, appearing, indeed, to have been sunk in crushed rock of the modelo formation; however, in view of the uncertainty as to the dip of the fault plane, it may be that they pass at slight depth from the fragmental modelo into the more solid strata of the older formations north of the fault.

The maximum depth attained is a little over 1,000 feet. The wells are all small, 12 barrels per day being the largest individual yield at the present time. The gravity of the oil varies somewhat from well to well, but the average is approximately 19° B. The colour of the oil is green. The only flowing wells are those of the Ojai Co., which lie west of the others, with their collars at a considerably lower elevation; they are also very shallow, and are, moreover, located directly in the line of seepage of the region.

Field South of Santa Paula Ridge.

The productive oil territory immediately east of Santa Paula Canyon lies at the foot of the steep southern face of San Cayetano Mountain, and is the eastward

extension of the Ojai, Silver Thread and Sulphur Mountain districts.

The wells of this field are confined chiefly to the brown shale, and range in depth from a few hundred to nearly 2,000 feet. Sandy beds undoubtedly occur; but in the main the strata are blue, brown and black shale, with occasional harder layers, known to the drillers as "hard shells." The oil is found in the coarser sediments. The Empire wells, in the eastern part of the field, shew traces of the Fernando sandstone and conglomerate, from which, doubtless, they draw a portion of their oil, the remainder coming from the underlying Modelo formation. Some of the wells of this field are reported to have started at 200 barrels or more, the yield after a short time falling off until it is now between five and 20 barrels. The oil is light, its gravity being 35° B., and of greenish colour, resembling in a measure that from the same formation in the Puente Hills.

The companies operating east of Santa Paula Creek are the O'Hara, the Chicago Crude, the Pacton Gold Bond, the Pure, the Hartford, the Cuniff and the Empire.

Sespe Fields.

The Sespe fields include that portion of the territory north of the Santa Clara Valley, which lies adjacent to Sespe Creek in the lower eight or ten miles of its course, together with the area about Little Sespe, Fourfork, Tar and Bear Creeks and Pine and Cold Water canyons, all in the Sespe drainage system.

The wells in the Sespe district may be grouped as follows:—Those of the Union Consolidated Oil Co. in Sespe canyon, at the base of Sulphur Peak; those in the vicinity of Devilsgate, a narrow gorge of the Sespe, two or three miles below the Union wells; the Ivers wells, still lower in the canyon; the Kentuck wells, also in Sespe Canyon, just above the mouth of Little Sespe Creek; the Happy Thought wells, on the south bank of Little Sespe Creek, near its mouth; the Foot-of-the-Hills wells, and the wells on Tar Creek.

Pole Canyon.

Pole Canyon, although but two miles from Sespe Creek, lies wholly beyond the area of disturbed rocks that are so well developed at the entrance to the gorge of the Sespe. Although no productive wells have yet been drilled in this territory, it is deemed advisable to include here a short discussion of its structure, as it connects two productive areas, and may at some future time be found on careful prospecting to be itself an oil-producing region.

At the north end of the section, on the eastern flank of Hopper Mountain, the southern and western edge of an extensive outcrop of modelo sandstone is seen. South of this outcrop is a narrow belt of Vaqueros shale which is locally crumpled into an assymmetric anticline. South of the Vaqueros area the modelo formation reappears, turned past the vertical at the crest of the ridge east of Pole Canyon, but quickly regaining its southerly dip in the slopes below. At the lower edge of the outcrop there is some confusion in the succession of strata, and in the dips it is believed that a slight displacement has taken place in addition to an overthrow.

(To be continued).

The American Oil Market.

New York, Week ended Sept. 14th.

The most interesting news of recent developments in the lower south-west fields has been the strike of a good producer in the Battelle district of Monongalia county, West Virginia, as a result of fourth sand operations. As an initial production it registered nearly 300 barrels a day, which was increased by about 200 barrels under agitation. The well is inside of defined limits and offers no encouragement for new territory. Disappointing results have characterised operations in Brook county in the same State looking to the extension of the Holliday Cove district, the indications of which seemed favourable beyond the southern limits. Several tests disclosed neither oil nor gas. New work has been stimulated in Tyler county, West Virginia, but nothing of an unusual character has been noted. There is a persistent search for virgin territory, but there has been little attempt at wildcatting, and the more conservative operators who have been content to restrict their energies to the defined districts are believed, on the whole, to have been more fortunate than the class which has been attracted by the possibility of striking something out of the ordinary in new fields. Late completions in Pennsylvania, says the *Oil, Paint and Drug Reporter*, shew invariably light pumpers, and south-eastern Ohio operations have been attended with the same meagre results. The eagerness with which work through the fields of the Pennsylvanian classification has been pushed during recent weeks is manifested in the detailed returns from the various districts for August, the completions numbering 703, the nearest approach to which so far this year was the record of 685 for June. The August deliveries were the heaviest so far this year, amounting to 5,783,092 barrels, more than half-a-million barrels in excess of the shipments during July. A review of the Gulf Coast fields for August shews a gain in production by more than double that for July. This substantial increase is accounted for by the record of the Jennings field, which contributed 8,340 of the 12,409 barrels for the month. The completions during August were only five wells in excess of those for July, while there were six more dry holes during the later period. Advices from Illinois report the largest day's pipe line runs in the history of the field as 193,848 barrels on September 8th. During the first week of the month the runs aggregated 497,905 barrels, while the shipments totalled but 4,297 barrels.

REFINED AND PRODUCTS.—The demand for refined has shewn increasing proportions both for domestic and foreign account, clearances for the week being considerably heavier than those for the previous week. Our records shew a total of 10,413,060 gallons from New York and 9,265,965 gallons from Philadelphia for the current week, against 8,033,780 and 8,553,192 gallons, respectively, as previously reported. Charters during the week comprised 160,000 cases for October shipment to China, 18,000 cases to Matanzas, and 4,000 barrels to Marseilles. Nothing of new interest has developed regarding prices, but the market rules with decided firmness at lately prevailing quotations. Advices to the *Reporter* from the foreign markets indicate no material changes. At Baku and Batoum conditions are reported satisfactory, with little fear of labour disturbances. On the Baku market crude oil was reported slightly easier, but kerosene and residuals were firmer. London and Liverpool continue steady for American and Russian lamp oils. No changes have been recorded on the Indian markets. American and Eastern oils are reported lower in Shanghai. The products are moving with their accustomed freedom, and the market is kept in relatively light supply, with quotations firm and unchanged for all descriptions. The export movement in naphtha has been especially active during the week, clearances aggregating 257,150 gallons, against 35,620 gallons during the previous week.

CLOSING QUOTATIONS

	CRUDE.	Week ended	
		Sept. 7. 1907.	Sept. 14. 1907.
Pennsylvania crude in bbls.		\$8.20	\$8.20
Pennsylvania crude in bulk		4.75	4.75
Residuum, bbls. for export		6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Sept. 14. 1906.	Sept. 14. 1907.
Tiona		1.74	1.78
Pennsylvania		1.64	1.78
North Lima		0.98	0.94
South Lima		0.93	0.89
Indiana		0.93	0.89
CANADIAN OIL:			
Petrolia		1.37	1.34

REFINED—FOR EXPORT.

		Week ended	
		Sept. 14. S.W.	Sept. 14. W.W.
Barrels, cargo	per gal.	\$8.45	@ 10.45
Philadelphia		8.40	@ 10.40
Bulk, New York		5.00	@ 7.00
Bulk, Philadelphia		4.95	@ 6.95
Cases, New York		10.90	@ 13.90
Cases, Philadelphia		10.85	@ 13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Sept. 7. 1907.	Sept. 14. 1907.
3,000 to 10,000		10.80	10.80
1,000 to 3,000		10.85	10.85

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Sept. 7.	Sept. 14.
120 fire test, S.W. .. in barrels		12	12
130 fire test, S.W.		12½	12½
150 fire test, W.W.		13½	13½
In bulk from tanks		10	10
300 fire test		13½@14	13½@14

NAPHTHA AND GASOLENE.

		Week ended	
		Sept. 7.	Sept. 14.
Naphtha, crude, car. lots, 68 @ 72 deg.		16.00	16.00
Gasolene, 86 deg... ..		24.00	24.00

PENNSYLVANIAN OIL RUNS from Sept. 4th to Sept. 9th were:—Sept 4th, 184,758; Sept. 5th, 87,674; Sept. 6th and 7th, 232,236; Sept. 8th, 209,607; Sept. 9th, 202,293. For the month of August, 2,815,316.

THE DELIVERIES OF PENNSYLVANIA OIL from Sept. 4th to Sept. 10th were:—Sep. 4th, 204,599; Sept. 5th, 172,022; Sept. 6th, 181,243; Sept. 7th and 8th, 286,672; Sept. 9th, 180,863; and Sept. 10th, 201,700. For the month of August, 5,789,092.

CLEARANCES FOR THE WEEK.

During the week ended Sept. 13th, and since Jan. 1 the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1906.
Refined	10,413,060	330,373,285	324,251,794
Crude	—	1,433,925	232,900
Naphtha	257,150	6,773,590	13,412,574
Residuum	—	416,827	3,617,000

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Sept. 13th ..	13,884,080
Total from New York, from Jan. 1st, 1907 ..	492,017,301
Same period last year	433,251,960
Increase	58,765,341
From United States, week ended Sept. 13th ..	32,434,839
Total from United States, since Jan. 1st, 1907 ..	884,764,973
Same period last year	843,509,897
Increase	41,255,076

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The "Review" Shipping List.

SEPTEMBER 27, 1907.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Smyrna	—	At Malta, Sept. 20	ENERGIE	Philadelphia	Danzig	P. Dunnet Head, Sept. 20
ALICE ISABELLE..	Sables d'Olonne	Philadelphia	Arr. Sept. 20	ERIVAN	Manchester	Batoum	P. Sagres, Sept. 23
ALEMBIC	New York ..	Sydney (C.B.)	L. Aug. 8	ETELKA	Antwerp....	Batoum	Arr. Sept. 19
AMERICAN	New York ..	Antwerp	L. Sept. 14	EUPLECTELA	Hamburg ..	Black Sea ..	P. Constant'ple, Sept. 23
APPALACHEE	Calcutta	—	P. Perim, Sept. 22	EXCELSIOR	New York ..	Hamburg ..	L. Sept. 14
APSCHERON.....	Batoum	Venice.....	P. Constant'ple, Sept. 19	EZIO	—	—	Coasting Peru
ARAL.....	Hamburg ..	Philadelphia	P. Dunnet Head, Sept. 19	FRANCE MARIE..	Marseilles ..	Philadelphia	L. Sept. 19
ARAS.....	Newport....	Kustendje ..	L. Sept. 21	GEESTEMUNDE..	Philadelphia	Christiana ..	L. Sept. 21
ARGYLL	—	—	Coasting U.S. (Pacific)	GENESSE	Manchester	New Orleans	P. Eastham, Sept. 21
ASHTABULA	San Francisco	Shanghai ..	Arr. Sept. 5	GEORGIAN	Philadelphia	—	L. Sept. 17
ASTRAKHAN.....	Hamburg and Tyne	Philadelphia	Arr. Sept. 16	PRINCE GOLDMOUTH	East Indies..	Channel	P. Gibraltar, Sept. 24
ATLAS	—	—	Coasting U.S. (Pacific)	GUTHEIL	New York ..	Swinemunde.	L. Sept. 18
AUGUSTA	Liverpool ..	Havana	P. Fastnet, Sept. 18	HAINAUT	Antwerp	Galatz	Arr. Sept. 15
AUGUST KORFF..	Manchester..	Philadelphia	Arr. Sept. 24	HARRY	Rouen.....	Middlesbro'	Arr. Aug. 20
AUREOLE	Philadelphia	Sunderland..	P. Dunnet Head, Sept. 25	WADSWORTH	—	—	—
AZOV.....	—	—	Trading on W.C. of South Amca.	HELIOS.....	Bremerhaven	Philadelphia	P. Dunnet Head, Sept. 14
BAKU STANDARD	Ibrail	Bordeaux ..	P. Sagres, Sept. 21	HERMIONE	Rouen.....	Tyne	Arr. Aug. 25
BALAKANI	Philadelphia	Antwerp	L. Sept. 18	HOTHAM	Philadelphia	Calais	Arr. Sept. 25
BATOUM	Singapore ..	Aomori	L. Sept. 21	NEWTON	—	—	—
BAYONNE	New York ..	Messina	L. Sept. 9	HOUSATONIC	Kustendje ..	Bombay	At Port Said, Sept. 19
BEACON LIGHT ..	Rotterdam ..	Philadelphia	P. Lizard, Sept. 11	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BEME	Rangoon....	Kurrachee ..	L. Sept. 2	JOANNIS COUTZIS	Penarth	Batoum	L. Sept. 21
BLOOMFIELD	Rotterdam ..	Tyne	Arr. Aug. 9	J.B.AUG.KESSLER	Singapore ..	Channel	L. Aug. 31
BORJOM	Alexandria..	Batoum	At Constant'ple, Sept. 14	JAMES BRAND	Philadelphia	London	Arr. Sept. 21
BRILLIANT	Tyne	New York ..	L. Sept. 17	JULES HENRI	Marseilles ..	Philadelphia	P. Tarifa, Sept. 6
BROADMAYNE....	Cardiff	Philadelphia	L. Sept. 25	KURA	Amsterdam..	Tyne	Arr. Sept. 24
BULLMOUTH	Calcutta	Aroe Bay ..	L. Aug. 28	LA CAMPINE.....	Tyne	Philadelphia	L. Sept. 12
BULYSESSES	Singapore ..	New York ..	L. Colombo, Sept. 10	LA FLANDRE	New York ..	Antwerp	Arr. Sept. 10
BURGERMEISTER	Stettin.....	Philadelphia	L. Tyne, Sept. 24	LA HESBAYE.....	Antwerp	Philadelphia	L. Sept. 21
PETERSEN	—	—	—	LA MADELEINE ..	Algiers	Brest	Arr. June 16
CALCUTTA.....	Shanghai ..	San Francisco	L. Aug. 26	LA VIGUESA	Vigo.....	Philadelphia	L. July 19
CAPTAIN A. F.	Port Arthur	New York ..	Arr. Sept. 3	LACKAWANNA....	Plymouth ..	Philadelphia	L. Sept. 25
LUCAS	(Texas)	—	—	LANSING.....	—	—	At San Francisco, Aug. 28
CARDIUM	Kustendje ..	Bombay	L. Suez, Sept. 16	LE COQ.....	Kustendje ..	Havre	Arr. Sept. 24
CATANIA	San Francisco	—	At Port Harford, prev. Sept. 13	LOUTSCH	Batoum	Odesa	L. Aug. 14
CAUCASIAN	Antwerp	Philadelphia	P. Scilly, Sept. 22	LUCERNA	Philadelphia	Bergen	P. Del. Break., Sept. 8
CHARLOIS	Amsterdam..	New York ..	Arr. Sept. 20	LUCILINE	Philadelphia	Dunkirk ...	P. Del. Break., Sept. 15
CHESAPEAKE	Philadelphia	Calcutta	At Port Said, Sept. 24-5	LUMEN.....	Tyne	Philadelphia	Arr. Sept. 17
CHESTER	Antwerp	Philadelphia	Off the Wight, Sept. 25	LUX	Rouen.....	Philadelphia	Arr. Sept. 24
CIRCASIAN	Talara.....	Callao	L. Salaverry, Aug. 6	MANHATTAN	Alexandria..	Batoum	P. Dardanelles, Sept. 16
PRINCE	—	—	—	MANNHEIM	New York ..	Flushing....	P. Lizard, Sept. 24
CLAM	Madras	Balekpannan	L. Sept. 1	MARGARETHA ..	Rio Grande	Montevideo .	Arr. Sept. 8
COL. E. L. DRAKE	San Francisco	Seattle.....	L. Sept. 10	MAVERICK.....	San Francisco	Redondo....	Arr. Sept. 10
COWRIE	Kustendje ..	Bordeaux ..	P. Peniche, Sept. 22	METEOR.....	Singapore ..	Rotterdam ..	Arr. Sept. 21
CUYAHOGA	Manchester	New York ..	P. Fastnet, Sept. 25	MEXICAN PRINCE	Novorossisk	Hamburg ..	Arr. Sept. 22
CYMBELINE	London	Newport....	P. Barry Island, Sept. 25	MIRA	Philadelphia	Manchester	L. Sept. 16
CZAR NICOLAI II.	Hamburg ..	Batoum	Arr. Sept. 21	MUREX.....	Shanghai ..	Palembang..	L. Aug. 6
DAGHESTAN.....	St. Louis (Rhône)	Batoum	L. Sept. 20	NARRAGANSETT..	Tyne	New York ..	P. Dunnet Head, Sept. 14
DAKOTAH	San Francisco	China	L. Sept. 7	NERITE	—	—	Tr. in China Seas
DELAWARE	Avonmouth..	Philadelphia	Arr. Sept. 16	NEW YORK	Southampton	New York ..	S'gld. Browhead, Sept. 23
DEUTSCHLAND ..	Amsterdam..	New York ..	Off the Wight, Sept. 19	OCEAN	Rotterdam ..	New York ..	Arr. Sept. 20
DIAMANT	Philadelphia	Copenhagen	P. Reedy Island, Sept. 12	OILFIELD	Rouen.....	Tyne	Arr. Sept. 14
EDWARD	Hull	Hamburg ..	Arr. Sept. 23	ORANJE PRINCE..	Flushing....	Tyne	Arr. Sept. 15
DAWSON	—	—	—	ORIFLAMME	Rouen.....	Philadelphia	P. Lizard, Sept. 14
ELAX.....	Singapore & Thameshaven	Barrow	Arr. Sept. 21	OSCEOLA	Boston	Gen. America	L. Sept. 21
ELISE MARIE	Tyne	Philadelphia	P. Butt of Lewis, Sept. 20	OTTAWA	London	Tyne	Arr. Aug. 4
				OURAL	Tyne	—	P. Dover, Sept. 9
				PALEMBANG	Singapore ..	Palembang..	L. Aug. 16
				PAULA	Oxelosund ..	Philadelphia	P. Dunnet Head, Sept. 17
				PECTAN	Port Arthur (Texas)	Copenhagen	P. Lizard, Sept. 25
				PENNOIL.....	Philadelphia	Dover	P. Reedy Island, Sept. 14

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PERLAK	Calcutta	Madras	Arr. Aug. 20	SNOWFLAKE.....	Liverpool ..	Philadelphia	L. Sept. 18
PHOEBUS	New York ..	Hamburg ..	Arr. Sept. 20	SPONDILUS	Rotterdam ..	—	P. Malta,
PINNA	San Francisco	Japan	L. Gaviota, Sept. 20	STANDARD	Philadelphia	Gothenburg	Sept. 23
POTOMAC	Batoum	London	P. Gibraltar, Sept. 21-2	STROMBUS	Cardiff	Singapore ..	P. Del. Break, Sept. 16
PROMETHEUS....	Rotterdam ..	New York ..	Off the Wight, Sept. 25	SURAM.....	London	Port Talbot	L. Sept. 21
PRUDENTIA	—	Singapore ..	Arr. Aug. 26	SUWANEE	London	Hull.....	L. Sept. 24
QUEVILLY.....	Philadelphia	Rouen.....	L. Sept. 22	SVIET	Batoum	Alexandria ..	L. Sept. 24
RION.....	Port Talbot	Philadelphia	L. Sept. 24	TELENA	London	Rangoon....	Arr. Sept. 16
ROCK LIGHT	Port Arthur (Texas)	Rotterdam..	P. Cape Henry, Sept. 12	TEREK.....	Hamburg ..	Philadelphia	Arr. Sept. 19
ROMANY.....	Singapore ..	Channel	L. Sept. 17	TIFLIS	Batoum	Hamburg ..	P. Lizard, Sept. 10
ROSSIJA	Hartlepool ..	Archangel ..	L. Sept. 24	TIOGA	Emden.....	Galveston ..	Arr. Sept. 21
ROTTERDAM	Santos & Port Natal	Calcutta	L. Port Natal, Sept. 5	TONAWANDA	San Francisco	—	Off I. of W., Sept. 7
RUSSIAN PRINCE	Philadelphia	Tampico	P. Reedy Island, Aug. 28	TROCAS	Sydney	Balekappan	L. Sept. 12
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	TURBO.....	Hamburg ..	Port Arthur (Texas)	L. Sept. 10
SAN CRISTOBAL..	Tyne	Philadelphia	P. Prawle, Sept. 19	TUSCARORA	London	New York ..	P. Dungeness, Sept. 20
SAN IGNACIO	Philadelphia	Gijon	L. Del. Break., Sept. 16	TWINGONE	Rangoon ..	Madras	Sept. 20
DE LOYOLA	—	—	—	VEDRA.....	—	Hiogo	L. Sept. 25
SAXOLEINE	Blaye	Philadelphia	L. Dartmouth, Sept. 20	VILLE DE DIEPPE	Passage West	Philadelphia	Arr. prev. Sept. 5
SEMINOLE.....	Calcutta	San Francisco	L. Aug. 24	VOLUTE	Samboe	—	L. Roche's Point, Sept. 21
SINGU	—	—	Tr. in East Indies	WASHINGTON....	Venice.....	Kustendje ..	L. Sept. 18
				WILLKOMMEN....	Danzig	Hamburg ..	L. Sept. 20
				WINNEBAGO	Itosaki	Muroran	Arr. Sept. 10
							L. Sept. 1

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

September 27th, 1907.

Refined Petroleum has increased in price $\frac{1}{4}$ d. since our last report, and the following are the present prices:— Russian and Roumanian, $6\frac{1}{4}$ d.; American, $6\frac{3}{4}$ d.; Water White, $7\frac{3}{4}$ d.

LUBRICATING OILS

are unaltered as follows:—

American pale, £7 7s. 6d. to £11.

American dark cylinder, from £8 10s.

American filtered cylinder, from £11 2s. 6d.

Shellene, £5. No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine has been fluctuating somewhat since our last report, having at one time nearly reached 40s. again, but the demand having fallen off, the price has again fallen and is now quoted for Spot 38s.; October to December, 38s. 6d.; and for the first four months of next year, 39s. 6d.

LIVERPOOL OIL MARKET.

September 26th.

Refined oils are quiet, and sellers quote $5\frac{1}{8}$ d. for Russian, Galician or Roumanian; and $6\frac{5}{8}$ d. to $7\frac{5}{8}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. $0\frac{1}{2}$ d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, September 26th.

Refined, in cases, is steady at 10.90; Standard White, 8.45; Credit balances, 1.78c.

PHILADELPHIA, September 26th.

Standard White is still quoted at 8.40.

RUSSIA.

BAKU, September 23rd.

The Baku oil market is firm. Light crude oil, spot, $31\frac{1}{2}$ copecs per pood; residuals, in ships, 31 copecs; kerosene, in ships, $43\frac{1}{2}$ -44 copecs.

BELGIUM.

ANTWERP, September 23rd.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, September 21st.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34.25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, September 23rd.

The kerosene market is firm. The price of American Standard White is 7.50 marks per 50 kilos.

ROUMANIA.

September 24th.

Crude oil from different fields, including	Francs.
pipe line charges, per 100 kgs. ...	4.10-4.20
Refined oil, exclusive of taxes ...	8.00- —
Motor benzine, including taxes ...	23.00-24.00
Benzine, doubly refined ...	25.00-26.00
Residuals in tank waggons, at refinery ...	3.60-3.70
Paraffin ...	120.00-125.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.00- —
Benzine, sp. gr. 0.710-0.715 ...	23.00-24.00
„ sp. gr. 0.715-0.720 ...	22.00-23.00
„ sp. gr. 0.730-0.740 ...	15.00-16.00
„ sp. gr. 0.745-0.755 ...	11.00-12.00

INDIA.

BOMBAY, September 6th.

Market strong.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. ..	Rs. 6 4 2
„ Chester, 125 deg. ..	4 12 2
„ Monkey Brand, 125 deg. ..	4 4 2
„ Bulk, 125 deg. (in local made tins) ..	3 12 6
„ 125 deg. (8 Imperial gallons) ..	3 2 6
„ "White Camelia" brand, 125 deg. ..	No stock.

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair ..	3 8 0
Sumatra "Rising Sun," bulk, per unit ..	3 3 0
„ tins, per pair ..	3 13 0
Silverlight cases, per case ..	5 4 0
Sumatra, "Anchor" per case ..	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for
this Journal by . . .
the Custom House.

FOR THE WEEK ENDED 16TH SEPTEMBER, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	No. OF GALS.	PORT WHENCE.
Sept.	LONDON—			
10	Fielder, Hickman and Co...	Lub.	22,160	New York
10	W. H. J. Alexander ..	"	2,880	"
10	Anglo-American Oil Co. ..	"	45,160	"
10	Ragosine and Co. ..	"	2,850	"
10	" ..	"	9,530	Philadel.
10	A. Brown and Co. ..	"	2,000	Hamburg
10	London and India Docks Co.	"	2,800	"
10	Craven and Co. ..	"	80	"
11	Page, Son and East..	"	240	Antwerp
11	Lubricating & Fuel Oils, Ltd.	"	12,300	"
11	A. Brown and Co. ..	"	4,800	Philadel.
11	E. J. Walkenshaw ..	"	4,000	"
11	Anglo-American Oil Co. ..	"	35,200	"
12	London and India Docks Co.	"	520	"
12	R. Park and Co. ..	"	240	Marseilles
13	London and India Dock Co.	"	2,720	Hamburg
13	H. Funck and Co. ..	"	6,000	Philadel.
13	A. Brown and Co. ..	"	4,800	Philadel.
13	Perkins and Homer ..	"	2,400	"
13	Ocean Oil Co. ..	"	7,600	"
13	Mordaunt Bros. ..	"	3,300	"
13	Anglo-American Oil Co. (Tuscarora)	Lamp	1,353,470	New York
13	" ..	Gas	602,810	"
14	British Petroleum Co. (Rion)	"	779,000	Philadel.
14	F. Randall ..	Lub.	11,000	"
14	Scott's Wharf ..	"	6,000	New York
16	G. W. Sheldon and Co. ..	Lub.Gr.	440	"
16	A. Duckham and Co. ..	Lub.	3,000	Baltimore
16	Asiatic Petroleum Co. (Elax)	Benzine	425,940	Pulo Samboe
16	London & India Docks Co..	Lub.	4,000	St. Petersburg.
16	Bowring Petroleum Co. ..	"	670	Antwerp
	LIVERPOOL—			
10	George B. Taylor ..	"	1,480	New York
10	Meade-King, Robinson & Co. (Erivan)	"	259,900	Batoum
10	" ..	Resid.	62,980	"
10	Bramwell, Fern and Co. (Erivan)	"	62,980	"
10	" ..	Lub.	259,900	"
10	Meade-King, Robinson & Co.	Resid.	4,760	Toledo
10	Wilson, Sons and Co. ..	Lub.Gr.	1,400	Rotterdam
11	Cunard Steamship Co. ..	Lub.	40	Trieste
11	Pickfords, Ltd. ..	"	240	Antwerp
12	Liverpool Storage Co. ..	Lub.Gr.	4,000	Trieste
12	Jas. Light and Sons ..	Lub.	2,000	New York
12	A. Hopps and Sons..	M. Colza	6,380	Baltimore
12	" ..	Lub.	10,400	"
12	Midland Railway ..	"	950	Philadel.
12	W. B. Dick and Co. ..	"	20,530	"
12	Meade-King, Robinson & Co.	"	28,560	"
12	Worthington and Boler ..	"	4,000	"
12	Crew, Levick and Co. ..	"	9,420	"
12	" ..	M. Colza	2,040	"

DATE	PORT AND IMPORTERS	DESCRIP- TION.	No. OF GALLS.	PORT WHENCE.
Sept.				
13	American Line ..	Lub.	5,760	Philadel.
13	Meade-King, Robinson & Co.	"	8,920	Baltimore
14	Vacuum Oil Co. ..	"	9,760	New York
14	G. B. Taylor ..	"	29,000	"
14	Anglo-American Oil Co. (Augusta)	Gas	809,900	Philadel.
14	" (Cuyahoga)	Lamp	663,390	"
16	Valvoline Oil Co. ..	Lub.	4,720	New York
16	E. H. Kellogg and Co. ..	"	3,000	"
16	Liverpool Warehousing Co..	"	320	"
16	W. B. Dick and Co. ..	"	3,980	"
16	King, Baillie and Co. ..	"	80	"
	BRISTOL—			
10	H. R. James and Sons ..	"	1,000	"
14	Pickford's ..	"	620	Hamburg
14	E. Stock and Sons ..	Lub. Gr.	80	"
16	W. G. Clarke ..	Lub.	100	Rotterdam
16	H. R. James and Sons ..	"	20,080	New York
16	W. Smith and Co. ..	"	49,240	"
	CARDIFF—			
11	Vacuum Oil Co. ..	"	8,800	Baltimore
	GOOLE—			
13	Lanc. and York. Ry. Co. ..	"	600	Antwerp
	GRIMSBY—			
10	J. Sutcliffe and Son..	"	110	"
	HULL—			
11	Anglo-American Oil Co. (Suwanee)	Lamp	696,120	Sabine
11	" ..	Gas	263,840	"
17	Wilsons and N.E. Railway Shipping Co.	Lub.	1,240	Riga
12	" ..	Naph.	960	St. Petersburg.
12	" ..	Lub.	1,710	Hamburg
12	" ..	"	18,800	New York
12	" ..	"	120	Hamburg
12	" ..	"	4,000	Antwerp
12	" ..	"	1,280	"
14	" ..	"	960	"
14	T. Meredith, Roberts and Co.	"	440	"
	MANCHESTER—			
10	Liverpool Storage Co. ..	"	120	New York
10	Anglo-American Oil Co. (August Korff)	"	480,240	Philadel.
12	D. Currie and Co. ..	"	520	Hamburg
12	Geo. B. Taylor ..	"	520	"
12	J. T. Fletcher and Co. ..	"	640	Antwerp
12	W. Hodgson and Co. ..	"	4,890	Riga
12	Bramwell, Fern and Co. (Erivan)	"	161,500	Batoum
12	" ..	"	4,000	"
12	Meade-King, Robinson & Co. (Erivan)	"	4,000	Batoum
12	" ..	"	161,500	"
16	D. Currie and Co. ..	"	1,600	Hamburg

MIDLAND RY-CARRIAGE & WAGON CO., LTD.,

Midland Works,
BIRMINGHAM.

—BUILDERS OF—

OIL AND OTHER

TANK WAGONS,

And Every Description of Rolling Stock

With WOOD or STEEL
UNDERFRAMES.

Anglo-American Oil Co., Ltd.,

SOLE IMPORTERS

Finest American Lamp Oils

WHITE ROSE



. and .



ROYAL DAYLIGHT.

Pratt's Motor Spirit

PACKED IN SEALED TWO GALLON CANS.

Universally used by all leading Motor
Manufacturers, Motorists, Railway and
Motor Bus Companies.



IN USE AND FOR SALE EVERYWHERE.

— QUALITY TELLS. —

To Dealers only.

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Sept.				
16	Anglo-American Oil Co. (Cuyahoga)	Lamp	705,150	Philadel.
16	"	Gas	284,330	"
NEWCASTLE—				
10	Tyne-Tees Steamship Co. ..	Lub.	6,280	Antwerp
16	"	"	1,920	"
SOUTHAMPTON—				
10	American Line ..	"	1,640	New York
ABERDEEN—				
11	R. Cannon, Reid and Co. ..	L. Paste	240	Hamburg
GLASGOW—				
12	Anchor Line ..	Lub.	85,380	New York
12	Clyde Shipping Co. ..	Lub. Gr.	100	Antwerp
GRANGEMOUTH—				
13	W. Graham-Yooll and Co. ..	Lamp	3,120	Hamburg
LEITH—				
10	W. Graham-Yooll and Co. ..	"	2,960	"
10	Henderson and McIntosh ..	Lub.	35,000	Philadel.
10	J. Cormack and Co. ..	"	2,000	Riga
12	G. Gibson and Co. ..	"	120	Antwerp
12	J. Currie and Co. ..	"	3,480	Hamburg
14	W. Graham-Yooll and Co. ..	Lamp	2,660	"
16	"	"	4,190	"
16	J. Currie and Co. ..	Lub.	820	"
16	G. Gibson and Co. ..	"	1,820	Antwerp
Total for Week ..			8,669,440	
Deduct to Correct :—				
LONDON—				
29/7	Mordaunt Bros. ..	Lub.	9,600	Hamburg
BARROW—				
30	Asiatic Petroleum Co. (Strombus)	Benzine	25,930	Singapore

FOR THE WEEK ENDED 23RD SEPTEMBER, 1907—

Sept. LONDON—

17	Page, Son and East ..	Lub.	3,080	Antwerp
17	"	Lub. Gr.	200	"
17	C. Duckham and Co. ..	Lub.	4,800	Baltimore
17	Fielder, Hickman and Co. ..	"	3,080	New York
17	Mercantile Lighterage Co. ..	"	620	"
17	Scott's Wharf ..	"	6,000	"
17	T. H. Lee ..	Benzine	50	Rotterdam
18	Schenker and Co. ..	Lub.	480	Antwerp
18	London and India Dock Co. ..	"	1,760	Hamburg
18	Consolidated Petroleum Co. (Cymbeline)	Lamp	1,698,000	Batoum
18	Anglo-American Oil Co. (James Brand)	Gas	650,000	Philadel.
18	Worthington and Boler ..	Lub.	5,040	"
18	London and India Docks Co. ..	"	80	New York
18	G. and H. Green ..	L. Comp.	3,500	"
19	Lubricating & Fuel Oils, Ltd.	Lub.	12,300	Antwerp
19	Anglo-American Oil Co. (James Brand)	Gas	701,430	Philadel.
19	British Pet. Co. (Suram) ..	Lamp	1,258,000	Pt. Arthur
20	G. Jennings ..	Lub.	4,610	Philadel.
20	T. H. Lee ..	"	50	Hamburg
21	Page, Son and East ..	"	520	Antwerp
21	"	Lub. Gr.	240	"
21	Schlieman's Oil Co. ..	Lub.	7,000	Hamburg
23	T. H. Lee ..	"	320	"
23	London and India Docks Co. ..	"	1,320	"
23	W. H. J. Alexander ..	"	2,160	Philadel.
23	Wilkins, Campbell and Co. ..	Lub. Gr.	2,440	"
23	Montague Record ..	Lub.	8,000	"
23	B. Jacob and Sons ..	"	4,080	"
23	Anglo-American Oil Co. (Potomac)	Lamp	1,303,040	Batoum

LIVERPOOL—

17	George B. Taylor ..	Lub.	440	New York
17	Stockdale and Doel ..	"	1,060	Philadel.
17	Meade-King, Robinson & Co. ..	Spirit	40,000	Rotterdam
17	"	Lub.	10,400	Hamburg
17	Pickford's, Ltd. ..	L. Paste	400	"
17	C. C. Wakefield and Co. ..	Lub. Gr.	510	Antwerp
18	Vacuum Oil Co. ..	Lub.	19,800	New York
19	W. Lees and Co. ..	"	490	Baltimore
19	A. Hopps and Sons ..	Lamp	20,360	Philadel.
19	Geo. B. Taylor ..	Lub.	35,600	"
19	Crew, Levick, and Co. ..	"	9,680	"
19	"	M. Colza	5,040	"
19	Worthington and Boler ..	Lub.	4,000	"
19	Meade-King, Robinson & Co. ..	"	10,000	"
20	"	Lub. Gr.	14,800	"

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Sept.				
20	American Line ..	Lub.	2,160	"
20	Vacuum Oil Co. ..	Lub. Gr.	20,000	"
20	"	Lub.	8,000	"
20	W. B. Dick and Co. ..	"	1,000	"
20	Stockdale and Doel ..	"	1,060	"
20	"	"	3,480	Boston
20	Geo. B. Taylor ..	"	45,860	New York
20	Uneo Asbestos Lub. Co. ..	"	3,370	"
21	Ismay, Imrie and Co. ..	"	1,520	"
23	Valvoline Oil Co. ..	"	2,050	"
BARROW—				
23	Asiatic Pet. Co. (Elax) ..	Benzine	960,960	Signapore
23	Burnyip and McDougal (Pectan)	Fuel	545,100	Pt. Arthur
BRISTOL—				
19	W. G. Clarke ..	Lub.	70	Rotterdam
19	Pickfords ..	"	510	Hamburg
19	E. Stock and Sons ..	"	2,000	"
GOOLE—				
19	Lancs. and Yorks. Railway	"	600	Antwerp
GRIMSBY—				
19	J. Sutcliffe and Sons ..	"	100	"
HULL—				
17	Wilsons and N.E. Railway Shipping Co.	"	240	"
19	"	"	10,400	Hamburg
19	"	"	120	Antwerp
19	"	"	1,200	Hamburg
20	"	"	9,260	Antwerp
23	"	"	1,000	"
23	"	"	360	Hamburg
23	"	"	3,840	New York
23	W. Gilyott and Co. ..	"	128,360	"
23	Hull and Neth. S.S. Co. ..	Tar oil	2,400	Rotterdam

MANCHESTER—

28/8	Meade-King, Robinson & Co. ..	Lub.	11,200	Philadel.
28/8	"	M. Colza	2,000	"
28/8	Liverpool Storage Co. ..	Lamp	2,470	"
19	J. T. Fletcher and Co. ..	Lub.	480	Antwerp
19	Worthington and Boler ..	"	400	Philadel.
20	Meade-King, Robinson & Co. ..	Gas	1,800,000	"
20	C. H. Morton and Sons ..	Lub.	800	New York
20	W. Hodgson and Co. ..	"	2,390	"
20	George B. Taylor ..	"	160,360	"

PLYMOUTH—

20	Anglo-American Oil Co. (Lackawanna)	Lamp	876,430	Philadel.
20	"	Petrolite	142,050	"
20	"	D. Resid.	274,950	"

SWANSEA—

17	Burgess and Co. ..	L. Paste	190	Hamburg
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GLASGOW—

17	Anchor Line ..	Lub.	46,020	New York
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GRANGEMOUTH—

19	W. Graham-Yooll and Co. ..	Lamp	5,720	Hamburg
19	"	"	2,000	"
19	J. Currie and Co. ..	Lub.	2,900	"
19	"	"	1,000	"
19	"	"	240	"
19	"	"	1,480	"

LEITH—

19	J. Currie and Co. ..	"	120	"
19	W. Graham-Yooll and Co. ..	Lamp	4,620	"
19	Geo. Gibson and Co. ..	Lub.	4,400	Antwerp

BELFAST—

19	J. C. Pinkerton and Co. ..	"	120	Hamburg
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Total for Week ..			10,952,140	
Total for the Fortnight ..			19,621,580	

Deduct to Correct :—

BRISTOL—

20/8	Anglo-American Oil Co. (Potomac)	Lamp	6,610	New York
20/8	"	Gas	2,730	"

LIVERPOOL—

25/7	Anglo-American Oil Co. (August Korff)	Lub.	11,520	Philadel.
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MANCHESTER—

27/7	Anglo-American Oil Co. (August Korff)	Lub.	6,250	"
1/8	" (Cuyahoga)	Lamp	46,680	"
29/8	Liverpool Storage Co. ..	Lub.	2,470	"

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVII. (New Series.)

OCTOBER 12TH, 1907.

No. 409.

Editorial Notes.

Retrospects at all times have a strange **A Look** fascination to the man of business, and we **Backward.** have no doubt that the review which we publish upon other pages, relating to the young days of the Russian petroleum industry will be found to interest not a few of our readers in various parts of the world. It was written by Dr. Dvorkovitz almost a quarter of a century ago, and at that time published in one of the leading journals of Russia. Then, as now, it will be noticed, the Russian industry has true friends who fought heart and soul in its interests; then, as now, the Russian Government looked upon the industry with that one eye for greedy gain, rather than assisting at all costs to place upon right lines and to assist in the development of a branch of trade which was sorely in need of assistance and advice. To-day, we all know, the petroleum industry of the Caucasus groans under the weight of Government enmity; or, rather, shall we say, the adoption of a short-sighted Government policy, but the same state of things practically prevailed in the far-off days of the early eighties. The marvel is how the industry has struggled to its position of supremacy in face of such antagonism. The portion of the article which we shall publish in our next issue chiefly deals with a matter which has been, and still is, a great drawback to the development of the Russian petroleum industry—the erection of refineries near the oil fields rather than at the port of export. Had the warning been taken to heart, the Russian industry would have been in a far better position to-day than it is, yet it is not too late for another country—Roumania—to take the lesson, and see that its refining industry is situated near the export ports, so that full advantage can be taken of the export trade, which is, and must of necessity be, of the greatest importance, since it is by an export trade that the Roumanian petroleum industry will live and grow strong.

The Market at Baku—Will Prices Drop? Throughout Baku oil circles the impression prevails that there is a possibility of an early decline in the price of crude oil. The existence of such opinion is proved by the general unwillingness of large firms to buy crude oil for future delivery, but when deals are contemplated, prices are offered much lower than those now ruling. It is interesting to note that yearly contracts for crude oil have been made at 25-25½ copecs, plus half the difference if the market price is above the contract figure. Residuals have been sold this month, for 12 months' delivery, at 28 copecs per pood, and for delivery in the winter at 25 copecs. These dealings and the existing high market prices do not go to substantiate the prevailing impression of an impending decline in prices, yet such a decline is not impossible if work at

the oil fields continues with the same forced rate which has marked it during the last few months. In fact, the high prices now ruling are due not merely to the smallness of the production at Baku, but to the ever present fear that the oil fields may at any moment cease work altogether. This circumstance enters into the calculations of both buyers and sellers. For the present, however, the oil fields are working, and there is a regular quantity of 40,000,000 poods of crude oil put on the market every month, which, to a certain extent, satisfies the demand. An increase in production, no matter how slight, may mark the turning point and send prices down, and experience has shewn that such moments are always fraught with the danger of a widespread disturbance in the trade.

The Roumanian Refining Industry. The healthy condition which we have previously spoken of as permeating the Roumanian refining industry is substantiated by the figures of the refinery operations which we give elsewhere in this issue. Following upon the great increase of crude production, the output of refined products has progressed at a very rapid rate during the present year, this increase, which covers benzine, illuminating oil and lubricants, approaching 20 per cent. when compared with the figures for the first half of 1906. One of the most gratifying facts which the figures prove, apart of course from the strengthening of the export trade, is the great increase recorded in the consumption of liquid fuel in Roumania. The use of liquid fuel in Roumania has been growing rapidly during the past few years, and whereas six years ago the annual consumption was only about 60,000 tons, it increased three years ago to double those figures. Now for the first six months of this year the Roumanian liquid fuel consumption has become more than double what it was three years ago.

America's Increasing Exports. As the monthly statistics published from time to time in the REVIEW shew, the American petroleum export trade improves month by month in its volume, and it would seem that the prejudice which was raised by the Government against American products some months ago has now, for the most part, been lived down. Taking the figures for the first eight months of this year, all classes, except naphthas, have experienced a greater export trade than was the case during the corresponding months of 1906. In the case of the crude oils exported, the volume of trade passing this year has decreased by about 24,000,000 gallons, but increased prices have made the deficit in values only \$1,000,000. In naphthas, while the volume has been less by about 2,500,000 gallons, the value has even increased by approximately \$200,000. In the illuminating and lubricating oil trade the increase in trade has amounted to about \$3,000,000, while 5,000,000 gallons is the increase for the eight months in the export of

residuum. One characteristic of this year's American export trade is the rapid rise of Sabine as an export port. This time last year it was not credited with any petroleum export trade, but so far this year its petroleum exports have amounted to over 30,000,000 gallons.

THE BAKU RUSSIAN PETROLEUM COMPANY, LIMITED.

YESTERDAY'S MEETING OF LARGE SHAREHOLDERS.

There was war in the air which pervaded one of the large rooms at the Cannon Street Hotel, yesterday, for the large shareholders of the Baku Russian Petroleum Co. were called together by Mr. A. C. Holzapfel in order to combine to protect their interests, which, of course, means making various changes in the directorate of the company.

Mr. W. Watson Rutherford, M.P., of Liverpool, was voted to the chair, and explained that, in order to qualify himself to take part in the agitation, he had visited the company's property at Baku at his own expense. He then proceeded to trace the events which had transpired since the floatation of the company in 1898, and detailed the condition of the various plots leased by the company, which plots he closely inspected during his recent visit. Dealing with the decrease of production during recent years, he said that the board gave it that this was caused by snow, labour troubles, etc., but that was all rubbish. It was simply bad management all round. He blamed the directors first for want of care and thought in the interests of the shareholders, and with regard to other things they had done which were contrary to the interests of the shareholders; no language was strong enough. He could not believe that any sane business men would have entered into contracts such as they did, had they not got some secret interest in the carrying out of those contracts, and the matter ought to be cleared up, if only in justice to the directors themselves. He also blamed the present directors for refusing an offer eighteen months ago which was made to them of £350,000—money which was badly wanted by the company. After careful examination he believed that the properties could be sold for £600,000 or more. They were the most valuable at Baku. £300,000 was needed to put the concern upon its legs, and to meet the various financial obligations, a greater part would have shortly to be found. If it was not forthcoming, then the only alternative was liquidation. The money ought to be raised if possible, but if not possible, then the best should be made of the assets. He then proposed:—

“That this meeting of some of the largest shareholders in the Baku Russian Petroleum Co. considers that the management of the company, both as regards production and the financial position, has not conduced to the best interests of the shareholders, and that an independent committee should be formed with power to take such steps as they may think desirable.”

Mr. Holzapfel, in seconding, said that during Mr. Tweedy's management, though oil prices were very small, dividends were made, and the property was economically managed. He thought Mr. Tweedy was the man they wanted to send back, and if they could only get him back to power again it would be a very good thing for the company.

The resolution was then put and carried with acclamation, and afterwards an influential committee was formed.

IMPORTANT STORAGE CONTRACT.

We learn that the Admiralty has recently placed with the well-known firm of oil storage builders—the Whessoe Foundry Co., Ltd., of Darlington and London—an order for six liquid fuel storage tanks of a capacity of 8,000 tons each.

LONDON OIL SHARE MARKET.

FRIDAY, OCTOBER 11TH, 1907.

The Stock Markets have been passing through a further period of great depression since our last issue. The continued decline in American securities and fears of labour troubles at home combining to cause a universal feeling of uneasiness.

There are few alterations to report in the Oil Share section from prices quoted when we last went to press, this department having been absolutely neglected.

On Friday, the 27th, Californian Oilfields were quoted ex-dividend at $5\frac{3}{4}$ -6, from 6 to $6\frac{1}{4}$, and on the following Wednesday the price was $\frac{1}{8}$ easier at $5\frac{5}{8}$ - $5\frac{7}{8}$. Subsequently prices drooped to $5\frac{7}{8}$ - $5\frac{11}{8}$, $5\frac{1}{2}$ -6, and have since succumbed to $5\frac{3}{8}$ - $5\frac{5}{8}$. A few shares in Californian Refineries have changed hands, but no alteration occurred in the price.

Russian Petroleum issues are slightly weaker, the Ordinary Shares having at one time been no better than $\frac{1}{8}$ - $\frac{1}{4}$, and the Preference $\frac{3}{16}$ - $\frac{5}{16}$, although the prices are now quoted a little closer at 3s. 6d. to 4s. 6d., and 4s. 6d. to 5s. 6d. respectively, while “B” Debentures are two points lower at 53-58.

Shell Transport Ordinary have fluctuated within very narrow limits, starting at 43s. 6d. to 44s. 6d., drooping in the interim to 42s. to 43s., and recovering 6d. at 42s. 6d. to 43s. 6d. Dealing has also taken place in the Preference Shares, which are quoted ex-dividend at $9\frac{7}{8}$ - $10\frac{1}{8}$. At the fortnightly settlement, which commenced on Wednesday last, there were few shares to be carried over, Baku Ordinary and Preference at the making-up price of 3s. and 3s. 6d. lose 3d. per Share, while Russian Petroleum Ordinary and Spies Petroleum also shed a similar amount at $\frac{3}{16}$ and 7s., Anglo-Russians at $\frac{1}{16}$, Schibaieff Ordinary at 3s., and the Preference at $1\frac{1}{4}$, all remain unaltered, the only advance being in the case of Shell Transport Ordinary, which have risen 3d. at 44s.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date October 11th, 1907, as follows:—

The quarterly meeting of the tin plate trade was held yesterday in Birmingham. There was not much business doing, and following the drop in tin, prices of tin plates were easier. Below we give particulars of shipments of tin plates for September, and for the past nine months.

1c	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	14/3 per box.
1c	19 $\frac{1}{4}$ × 14	120 „	110 „	14/3 „
1c	20 × 10	225 „	156 „	20/3 „

F.o.b. Wales. Tin lining and iron hooping extra.

SHIPMENTS OF TIN PLATES.

	Month of Sept.		Nine months ended September.	
	Quantity.		Quantity.	
	1906 Tons.	1907 Tons.	1906 Tons.	1907 Tons.
Russia	893	180	2,227	4,441
German	2,745	3,281	24,244	30,744
Netherlands ..	1,650	1,765	19,853	21,251
Belgium	1,219	419	9,828	5,819
France	1,919	1,407	19,405	19,872
Portugal	1,390	736	7,810	8,052
United States ..	7,403	2,590	41,837	46,723
British East Indies ..	4,009	3,010	36,426	39,847
Australia	1,031	1,058	12,397	10,492
Canada	2,422	1,973	11,800	15,484
Other countries ..	7,805	8,522	87,117	97,167
Total	32,485	24,941	272,944	299,892
Total Values ..	£420,908	£374,007	£3,573,496	£4,350,198

THE BULK OIL STORAGES IN MANCHESTER.

(By Our Roving Commissioner.)

By reason of the exceptional facilities which are placed at the disposal of all comers to Manchester through the medium of the Manchester Ship Canal, Cottonopolis to-day occupies a foremost place as a centre not only for the distribution of petroleum products among the great populations of Lancashire and

products, of which any large concern might well be proud.

To-day, the bulk storage for petroleum at or adjacent to the Ship Canal is approximately 80,000 tons, and if the projected schemes for the storage of liquid fuel mature, there is every probability that the bulk storage will be considerably increased before long.

In Trafford Park itself, we find the large and well-equipped depôts of the new named British Petroleum Co., and the Homelight Oil Co., both these concerns having their installations at the Barton end of the Park, and thus whilst drawing their bulk cargoes from the Ship Canal, have the additional advantage of being able to load into barges on the Bridgewater Canal, which, by means of a swing bridge, crosses the Ship Canal at this point.



THE BRITISH PETROLEUM COMPANY'S BARTON DEPÔT.

Yorkshire, but also for the storage of petroleum in bulk.

It is, therefore, not surprising to find that without exception the whole of our large distributing oil companies have made Manchester one of their most important branches, and have established large depôts almost alongside the great inland waterway—depôts which collectively can scarcely find an equal in any part of the kingdom.

Less than a decade ago, Trafford Park was one of the most rural spots that could

be found within many miles of Cottonopolis; to-day, it forms the busiest corner in Manchester's great hive of industry, and the air of activity which is everywhere apparent throughout its length and breadth tells its own tale of the progress and industrial development which the Manchester Ship Canal has brought in its train.

But long before many of our great manufacturing concerns turned their attention to the remarkable advantages offered by Trafford Park, our leading petroleum distributing companies had already established themselves, and, though some of the late comers had to be content with sites less favourable than others, one and all have to-day depôts practically in the centre of Manchester for the distribution and storage of their



THE MANCHESTER HOME OF "HOMELIGHT."

The storage now occupied by the British Petroleum Co. (more popularly known as the Consolidated Petroleum Co.) was that erected some years ago by the Pure Oil Co. The capacity of the two tanks is approximately 7,000 tons.

Close by stands the Manchester storage branch of the Homelight Oil Co., Ltd.—that concern which has made such rapid progress since its formation—then as the Caucasian Petroleum Export Co. some five years ago. Railway sidings connect the depôt with our great railway systems of the north and Midlands, there being all necessary arrangements at the depôt for the filling of tank cars, the repair of barrels, etc. The two tanks at the Homelight depôt, both of which are, of course, connected with the Ship Canal by

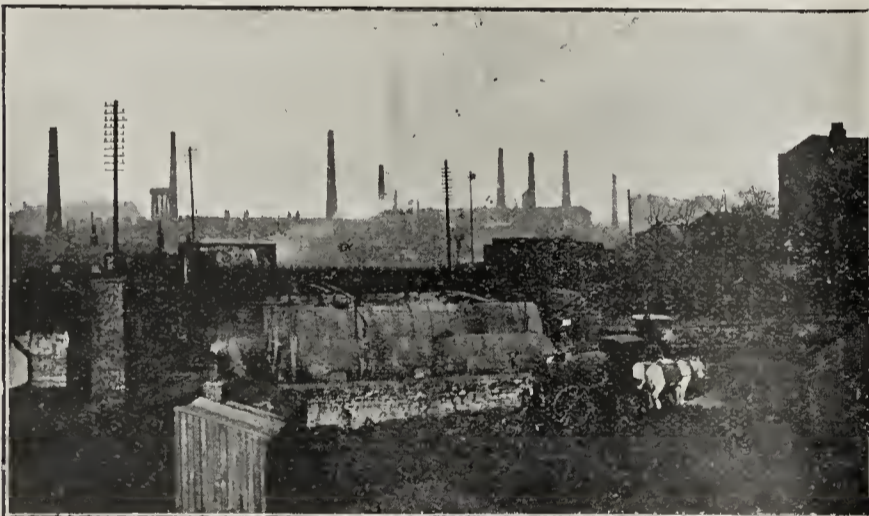


DISCHARGING OIL AT MODE WHEEL.

pipe lines, have a capacity of slightly over 8,000 tons, while only a few yards away stands the immense tank formerly used by the General Oil Storage Co., and which can be utilised when occasion requires. This tank is said to be one of the largest in the Kingdom, its capacity being 8,000 tons. Across the canal on the north side are situated the main storage depôt of the British Petroleum Co., together with the offices of the company, and an extensive installation for filling and repairing barrels. In all, there are here



A GROUP OF BRITISH PETROLEUM COMPANY'S TANKS AT WEASTE.



THE ANGLO-AMERICAN'S CORNBROOK DEPÔT.

five tanks enclosed within an earth wall, these tanks having a combined capacity of 22,000 tons, while still nearer Manchester, at Weaste, the company possesses another storage installation of four tanks with a combined capacity of 8,600 tons.

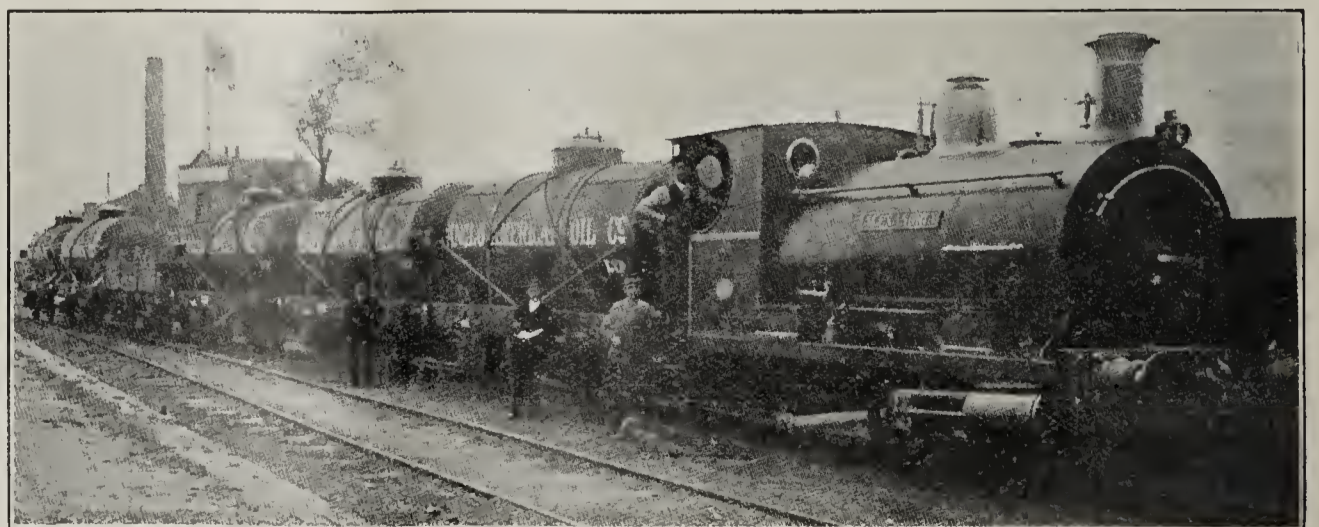
One of the earliest sites far the storage of petroleum in bulk at Manchester was at Mode Wheel, a position

commanding exceptional road and rail facilities on the one hand, and adjoining the Ship Canal itself on the other. Its situation is somewhat nearer the centre of Manchester than those depôts previously spoken of, while, being upon the north bank of the Canal, transport by rail can be carried out more expeditiously than from the opposite bank. Here, the Anglo-American Oil Co. possess no less than eight tanks with a combined capacity of nearly 12,000 tons, while in addition all facilities necessary for perfect organisation, for which the Anglo-American is famous, are provided in the way of cooperage shops, extensive platforms for the filling of tank cars, etc. At Mode Wheel also, the Liverpool Storage Co. have their chief installation, consisting of six tanks with a capacity of 10,000 tons, while the valuable and

advantageous nature of the site may be seen from the fact that the Manchester Corporation has two of its tanks, which together hold between 4,000 and 5,000 tons.

All these facts go to shew how great a centre the port of Manchester has of late years become for the distribution of petroleum and its products, and when one recollects that it is only ten years since the first bulk oil cargoes passed up the canal, the rapidity with which Manchester has progressed is apparent. During 1897 there were delivered in bulk, by means of the Ship Canal at Manchester, approximately 20,000 tons of petroleum. The following year the figures were doubled (as also was the bulk storage), while now the storages collectively receive certainly no less than 150,000 tons per annum.

There is no two opinions concerning the future, for in the days to come, Manchester as a distributing oil and fuel centre, will rise to even greater importance.



AN ANGLO-AMERICAN OIL TRAIN LEAVING MODE WHEEL.

THE THIRD INTERNATIONAL PETROLEUM CONGRESS AT BUCAREST.

THE SECTIONAL MEETINGS AND PAPERS.

(Continued from page 178.)

The section of the Congress devoted to the study of the questions of geology, exploration and exploitation continued its sittings on September 11th, when, at the request of Dr. Mrazec, Prof. Hofer occupied the chair.

Mr. Baskakoff read a paper upon "The Origin of Secondary Petroleum Deposits." The author came to the conclusion that the origin of secondary petroleum deposits was to be determined by the following data:—The mineralogical difference of the rocks impregnated with petroleum, the number of crevices in the rocks on the limits of the deposits, the intensity of the flow of oil in the places of the greatest rupture in the rocks, the pressure in the interior in general, and the difference in pressure in the various horizons. The volume of oil obtained did not correspond to the capacity of the horizons in the case of very productive boreholes. The quantity of solid remains of organisms did not correspond to the quantity of oil in the deposits; the absence in the formations of the primary material from which the oil had been produced.

Mr. Guiselin, in order to corroborate the statements of Dr. Mrazec in regard to the migration of petroleum, made a series of experiments. He demonstrated that it was possible to drive out by water the oil from a clay earth free from sand. To do that it was necessary to add the water in small quantities and bring pressure to bear on it.

Dr. Mrazec then read a paper on "The Formation of the Petroleum Deposits in Roumania." He stated that there did not exist any juvenile (anorganic) petroleum in great quantity; for the exploitable hydrocarbons were "vados" (organic origin). The main petroleum formations in Roumania were clays, whilst clearly all the sedimentary rocks were bituminous. The bituminosity attained its highest degree in regions characterised by the presence of salt. In Roumania it had been proved that round every main salt deposit there was a veritable aureole of hydrocarbons. The formation of salt and hydrocarbons was connected with a dry climate, *i.e.*, a climate of steppe or desert.

Dr. Mrazec also dealt with the question of the "Condition Necessary for the Formation of Petroleum Deposits." Generally, primary deposits were not exploitable, though the deposits in the younger strata were very rich. As an instance, he mentioned Moreni. On the question of migration, Dr. Mrazec declared that that could take place either through crevices or directly through the rocks. For the neogenous formations of Roumania a direct migration had to be admitted.

The causes of migration might be:—(1) pressure of gas; (2) water; and (3) the great orogenic pressures. He concluded that migration generally did not stop except under a water-bearing stratum. In regard to the conditions of the deposits in sands, Dr. Mrazec declared that a saturated sand could not yield any oil; it was to be considered as "dry." Only supersaturated sands could be exploited. Round a borehole which exploited an oil-bearing sand, there was formed a zone of affluence characterised by fluid zones in movement and islands of saturated sand. A borehole which encountered such an island was not productive.

The discussion upon the subject was then opened.

Dr. Day agreed with Dr. Mrazec that a water-bearing clay stratum was the best isolator for an underlying oil stratum. According to his experiments, the separation of oil by filtration was not a purely capillary phenomenon, *i.e.*, it did not depend solely on the size of the grain, but also on the nature of the filtering substance. He cited the example of Fuller's earth and of powdered silex, which did not yield the same results.

Mr. Mircea did not believe in the direct migration through rocks, especially for the Moreni oil field, where the clays between the petroliferous strata did not shew any traces of oil or gas.

Mr. Iscu considered the experiments of Dr. Mrazec were not convincing, as they did not accord with the natural conditions. In nature, the rocks were under greater pressure, and therefore more compact.

Dr. Mrazec said he had been misunderstood. At Moreni it was the great pressure over the line of overlapment which had forced the oil to migrate, and, therefore, whilst the southern side of the anticlinal was oil bearing, the northern side was quite dry. It was impossible to find traces of oil or gas in rocks when drilling with water flush.

Mr. Andrussow said that the point to be considered was not the pressure over the rocks, but the porosity of the latter.

Mr. Mircea said that it had not yet been proved that the northern side of Moreni did not contain any oil, because the most northern wells had been stopped in the salt formation. At Gura Ocnitza oil had been found also to the north of the salt formation. At Moreni the oil zone did not at all correspond to the theoretical anticlinal.

The following day the meeting was opened by Dr. L. Mrazec, and at his request, Mr. Syroczyński took the chair.

Mr. Gawronski read a paper upon "The Petroleum and Ozokerite Deposits in Galicia." The author stated that ozokerite is found exclusively in crevices, which generally have a direction parallel to the Carpathian range. He concluded that the horizontal deposits also represented filled-up crevices. As to Galician petroleum, he believed that it was formed in different horizons, and that there were workable deposits in the furrowed up regions. The large quantities of oil and gas, as well as the irregular production of wells, seemed to prove the existence of large crevices or pockets.

Mr. R. Sorge then read his paper on "The Influence of Baling on the Flow of Oil and Water towards the Borehole." Of the three methods of exploitation—baling, pumping, and exploitation by compressed air—baling was, he said, the most universally used. The speaker then treated the question mathematically in order to be able to calculate the diminution of pressure under the baler. For this purpose he established by experiment a co-efficient. The results are shewn in the following table:—

Diameter of baler.	Diameter of casing.	Proportion of the two surfaces.	Co-efficient of resistance.
13.3	26.6	$1.4 = 0.25$	1.07
17.9	26.6	$1.221 = 0.45$	3.77
21.3	26.6	$1.156 = 0.6+$	15.7
22.9	26.6	$1.135 = 0.7+$	45.6

Professor H. Hoefer next read a paper on "The Selection of a Spot for Drilling in Oil Fields." The author expounded the theory of anticlinals, and after a historical introduction of this theory, he discussed the various forms of petroliferous anticlinals, mentioning those open and closed. He dwelt specially upon the accidental curving of anticlinals into an arch, which he said offered the best conditions for exploitation. Further, in lateral anticlinals, the less inclined side was the richest in oil.

Mr. G. Munteanu-Murgoci presented a paper on "The Petroliferous Formations of Oltenia." After having established that all the tertiary formations were represented in Oltenia, he mentioned the fact that only in the paleogenous formation petroleum was found in primary deposits, and that the neogenous formation, contrary to deposits in eastern Muntenia, were deprived of the mineral. Where petroleum was found in sandy neogenous formation they found great dislocations, which had caused the oil to pass from the paleogenous to the neogenous formations. The tectonic conditions of these regions are very simple, complicated bends being entirely absent.

Mr. V. Iscu then read a paper on "The Anticlinals in Plains." He dealt with the zones of:—(1) Teleajen-Boldeshti-Harsa, and (2) Bucov-Urlati, with an extension to Buda-Nedelea-Ghisdoveni. Those zones have been determined by Prof. Hoefer's anticlinal theory. In practice, when searching for petroleum, one ought to be guided only by mathematically sure data. Of crude oil they had the following facts:—(1) Petroleum was a liquid product; (2) petroleum was lighter than water; (3) petroleum was found in the ground in the upper parts of porous strata; (4) petroleum had come up from great depths in the porous strata, as it had been found in all geological formations, and in certain Galician wells it

was found even under the eocene; (5) petroleum had travelled in the porous strata in an upward direction, either through crevices in synclinals or anticlinals, or through the pores; (6) the water, coming from the top, met the oil in the porous strata, where they arranged themselves according to their respective specific gravities. The uppermost parts of the porous strata were the anticlinals, and in particular the isles and domes of the anticlinals. To determine the extension of a petroliferous zone it was necessary to determine the general direction of the saddle of the anticlinal and of its slopes. The anticlinal might be symmetrical, inclined or reversed. It might be broken by folds of various kinds; it might be superimposed by other strata, but it nevertheless remained an anticlinal. The genesis or the fact whether the oil was inorganic or organic was also important in determining a petroliferous zone. On that basis had been determined the anticlinal from Teleajen to Harsa, which was an arch of 10 kilometres length. The anticlinal from Bucov to Urlati was also an elongated arch. By measuring those two anticlinals it was possible to determine the commencement of the curve of the Carpathians and the relation of this anticlinal to Tsintea-Baicoi and Moreni in the north, and to Buda-Nedelea-Ghisdoveni in the south. The value of that petroliferous zone from an economic point of view was the more important, as it was situated in the neighbourhood of the railways, which greatly facilitated the transport.

Mr. Gawronski, in opening the discussion, spoke against the anticlinal theory—at least as far as Boryslaw and Schodnica were concerned. The oil there accumulated by dislocation in folds and overlapping.

Mr. Benkendorf remarked that the conditions in a borehole were more complicated than Mr. Sorge supposed. Exploitation by compressed air had given excellent results. He added that the same oil stratum on the same side of the anticlinal might vary in yield according to the incline.

Mr. C. Hoiescu presented a paper on "Underground Waters in Petroliferous Regions." The study of the underground waters was, he said, of special importance for the Roumanian oil fields, as there the oil deposits were at a depth of 150 to 300 metres, which was the usual depth of the underground waters, whilst elsewhere, such as in America and Galicia, the oil deposits were at a depth which was inaccessible to the underground waters. The conditions which regulated the existence and movement of underground waters were:—(1) The impermeability of certain rocks and the alternating of permeable and impermeable rocks; (2) the tectonic condition of the ground, *i.e.*, the disposition of the rocks, and, more particularly the existence of folds, fissures or cavities; (3) the quality and configuration of the surface soil. The underground waters were divided, he said, into three categories:—(1) Infiltration waters, filtered in from the surface, and found in strata nearest to the surface; (2) underground water proper found at great depths (100 to 300 metres), which were generally inexhaustible, and had a great pressure; (3) salt, mineral and thermal waters found generally in

the deepest part of boreholes often immediately over the oil stratum, and sometimes in the same stratum. The surface waters needed not to be shut off at all; on the other hand, the underground waters of the second category had to be shut off, whilst the waters of the third category, being generally exhaustible, had to be shut off only after trial baling had failed to exhaust them. The system of shutting off the underground water and salt water at the same time was, in his opinion, wrong, and those waters had to be shut off separately. A careful analysis of the salt waters might sometimes give valuable indications as to the origin of the oil deposit. The methods employed for shutting off water were:—

- (1) Sinking the casing into a thick clay stratum, preferably one supported by an underlying layer of stone;
- (2) by cementation when no suitable clay stratum was encountered, or when the oil stratum was too near;
- (3) Canadian system of tying on to the base of the lower tubes cotton or manilla ropes. Any of those systems might be used according to the nature of the ground. It was advisable, however, to use one system only throughout one oil field.

Mr. Syroczyński opened the afternoon meeting, and Mr. D. A. Louis took the chair.

Messrs. I. Tanasescu and V. Tacit presented a paper on "Water Flush Drilling," dealing with the theory of the flow of water and combating the objections made against water flush drilling.

Mr. D. A. Louis presented a paper on "The Presence of Petroleum in the Eastern Part of the Egyptian Desert," of which he and Mr. D. A. Sutherland are joint authors. Mr. Louis remarked that the petroleum deposit situated on the western shores of the Red Sea were known in most ancient times, and that in neighbouring mines there were unearthed Roman lamps which were found to contain bituminous remains of petroleum. In more recent times Prof. Fraas reported upon the deposits in 1867, and attributed them to the distillation of animal remains combined with the more recent coral deposits, the heat necessary for the distillation being supplied by the fire springs which burn in the neighbourhood. In 1885 and later, numerous experiments were made to determine the origin and character of these deposits; but these experiments were not made systematically, and have not even been recorded. As to the character of the oil found, the analyses made by various specialists shewed great differences. The most recent analysis made by Dr. Iacunski shewed that the sample analysed was not recently extracted, but had been already exposed to the action of the air and also of the sulphur which abounds in the neighbourhood. The geological nature of the locality will shortly be determined by systematic drilling.

Mr. N. Mancas presented a paper on "The World's Production of Crude Petroleum since its Discovery in 1857 to the Present Day."

Mr. N. Cucu-Starostescu read a paper on "Natural Gases and their Industrial Uses." He described in detail the method of collecting the gas from the boreholes and gave some figures as to the quantities of natural gas obtainable from boreholes. He emphasised the great saving which could be effected by utilising these gases for motive power purposes, and cited the example of America. He advocated the utilisation of the gases from boreholes in Roumania.

Mr. Syroczyński thanked the author of this paper, which he considered as of great economic importance.

The meeting was then adjourned.

At its next sitting on the following Friday Mr. Kemnitzer presented a paper on "The Use of Wire Rope at the Oil Fields." He described the cables with round and rectangular sections, and dwelt on their elasticity. He then described the hollow cables constructed by him which have the advantage of being able to replace the rods in water flush drilling.

Mr. Loewenthal read a paper on "The Polatschek Pump," which is different in principle to all other pumps. It has no piston, but is composed of two columns separated by a space of a few millimetres, which is filled with the liquid raised. By this pump liquids mixed with sand may be extracted.

Mr. Leinweber read a paper on his "System of Oil Raising." The principle is to employ an endless band, the surface of which is covered with a porous cotton tissue. By a special appliance, which compresses the porous part of the band, the oil is recovered. This apparatus has many advantages, and can be used at great depths with casing of a small diameter.

Mr. Benkendorf read a paper on "The Anticlinal of Balakhany." He pointed out the dislocations of a secondary order in the arch, and their importance from the point of view of the richness of the oil deposits. In this locality have been found four or five salt water strata, the thickness of which decreases with the depth, and which separate strata containing oil, which increases in specific gravity with the depth.

Dr. Mrazec thanked all those who had presented papers to the first section and taken part in the discussions. All the 39 papers presented to the first section were of great importance, he said, from a scientific and technical point of view. He regretted that want of time did not permit to discuss all the papers, and proposed that the committee of the next Congress should fix the scientific and technical questions which should be treated by several reporters in special papers.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO OCTOBER 7th, 1907.

IN GALLONS.

[ALL RIGHTS RESERVED.]

COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Sept. 23.	From Jan. 1.	Since Sept. 23.	From Jan. 1.	Since Sept. 23.	From Jan. 1.	Since Sept. 23.	From Jan. 1.	Since Sept. 23.	From Jan. 1.	Since Sept. 23.	From Jan. 1.	Since Sept. 23.	From Jan. 1.	Since Sept. 23.	From Jan. 1.
Austria ...	—	—	6,000	79,580	—	67,770	—	—	—	—	—	—	—	—	6,000	147,350
Belgium ...	—	153,410	18,790	556,045	—	—	—	310	—	4,000	—	—	—	860	18,790	714,625
Canada ...	—	—	—	—	—	4,800	—	—	—	—	—	—	—	—	—	4,800
Dutch India.	—	—	—	—	—	—	—	—	—	19,670,290	—	—	—	—	—	19,670,290
Germany ...	19,680	1,280,735	43,230	1,146,530	—	2,000	—	—	—	80	—	—	800	4,900	63,710	2,434,245
Holland ...	—	1,070	170	12,410	—	—	—	—	14,000	506,180	—	—	—	99,970	14,170	619,630
Roumania ...	—	5,744,090	—	—	—	—	5,159,590	—	—	1,459,000	—	238,700	—	—	—	12,601,380
Russia ...	625,600	26,889,200	18,720	2,940,350	—	125,960	—	837,040	—	12,690	—	—	1,423,780	—	644,320	32,279,020
U.S.A. ...	1,777,840	76,319,770	1,589,040	31,119,915	—	854,660	—	39,416,560	1,433,340	4,889,440	1,020,000	5,677,570	621,690	1,763,890	6,441,910	160,041,805
Other Countries	—	950	530	58,915	—	4,760	—	—	—	2,500	—	40	—	117,790	530	184,955
	2,423,120	110,389,225	1,676,480	35,913,745	—	1,059,950	—	45,463,500	1,447,340	26,544,180	1,020,000	5,916,310	622,490	3,411,190	7,189,430	228,698,100

THE CALIFORNIAN PETROLEUM INDUSTRY.

A MOST FLOURISHING CONDITION.

The Californian petroleum industry is in a most flourishing state, and though we in England only occasionally have the great successes recorded brought home to us as we did when the California Oil Fields, Ltd., declared a dividend of 30 per cent., it is, nevertheless, a fact that the vast majority of the operating concerns are amassing remarkable profits, which recall the boom days of Texas.

Many companies there are—the California Oil Fields, Ltd., is one—which are not listed in the California Stock and Oil Exchange, for the reason that some directors object to such listing as it encourages the speculative element, but the following companies listed, together with their issued capital stock and the total dividends paid to date, in itself shews the highly profitable nature of Californian oil undertakings:—

Company.	Issued capital stock. Shares.	Total dividends. \$
Amalgamated ..	50,000	350,000
Alma	280,000	114,000
Associated	280,000	1,522,309
Brockshire	500,000	137,000
Caribou	80,703	184,032
Chicago Crude	1,000,000	15,000
Claremont	450,000	125,000
Esperanza	125,000	6,250
Four	300,000	177,000
Hanford	2,000	80,000
Home	100,000	440,000
Homestake	10,000	57,500
Imperial	100,000	1,340,000
Illinois Crude	200,000	19,500
Kern River	20,000	66,000
Linda Vista	383,850	3,838
Monte Cristo	500,000	265,000
Nevada County	250,000	15,000
Peerless	100,000	652,000
Reed Crude	100,000	1,101,000
Rice Ranch	300,000	69,000
Sovereign	500,000	60,000
Sterling	250,000	184,000
Superior	500,000	5,000
Thirty-three	100,000	640,000
Union	71,447	2,945,008
United Petroleum	14,680	734,356
West Shore	100,000	170,000
Total		11,480,294

DRILLING IN NORTHERN CAUCASUS.

Some little time ago we referred to a borehole which is drilled near Nevynnomyskaia station, on the Vladicaucasian railway. The well has now reached a depth of 1,092 feet with the second column of 8-inch casing. Commencing at 931 feet the hydrogen gas began to be replaced by another gas resembling petroleum gas. The strata now traversed are clays of various colours, the interleaved sand strata having disappeared at 630 feet. The owner of the well is now faced with the problem of the advisability of further drilling. An engineer who visited the place before the appearance of the gas, advised drilling to 1,400 feet, but the owner is hampered by lack of capital.

ROUMANIAN PETROLEUM EXPORTS IN AUGUST.

The following are the figures of the exports of petroleum products from Roumania in August:—

Destination	Crude, gas oil, distillate, and lub. oil. Tons.	Illuminating oil. Tons.	Benzine. Tons.	Total. Tons.
India	243	12,841	—	13,084
Germany	5	5,104	3,400	8,509
France	454	2,062	4,705	7,221
Belgium	—	3,451	—	3,451
Austria-Hungary	2,343	835	10	3,188
Italy	82	2,184	31	2,297
Turkey	53	2,426	14	2,493
Bulgaria	96	100	8	204
Servia	2	—	1	3
Total	3,278	29,003	8,169	40,450

OPERATIONS OF THE ROUMANIAN REFINERIES DURING THE FIRST HALF OF 1907.

The following figures shew the operations of the Roumanian refineries during the first half of 1907, as compared with the corresponding period of 1906:—

	Six Months, 1907. Tons.	Six Months, 1906. Tons.
Production of Crude Oil	554,482	404,358
Crude Oil delivered to the refineries for treatment	427,994	364,662
Output of Products—		
Benzine	62,658	53,499
Illuminating Oil	121,124	109,606
Lubricating Oils	24,040	21,900
Residuals	205,285	167,282
Total	413,107	352,287

The quantities of various products delivered from the refineries for home consumption were:—

	Six Months, 1907. Tons.	Six Months, 1906. Tons.
Benzine	287	242
Illuminating Oil	13,836	12,919
Lubricating Oils	2,599	2,998
Residuals	150,584	100,715
Total	167,306	116,874

The quantities of various products delivered for export were:—

	Six Months, 1907. Tons.	Six Months, 1906. Tons.
Benzine	49,136	34,016
Illuminating Oil	114,505	98,913
Crude Oil, Gas Oil, Distillaie, etc.	31,419	18,387
Total	195,060	151,316

BATOUM PETROLEUM SHIPMENTS.

The following are the figures of the shipments of petroleum products from Batoum during the week ended September 15th, 1907, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1906.	1907.	1906.	1907.
To Europe	401,000	—	390,000	173,000
To the East	190,000	284,000	—	1,000
To Russian Ports.	—	2,000	4,000	5,000
From 1st Jan. to 15th Sept.:—				
To Europe	9,764,000	12,268,000	6,064,000	7,195,000
To the East	5,120,000	8,014,000	45,000	314,000
To Russian Ports	2,257,000	1,577,000	180,000	142,000

THE RUSSIAN PETROLEUM AND LIQUID FUEL COMPANY, LTD. . .

*A Brief . . .
Review . . .
of an . . .
Important . . .
Publication.*



ITS BRILLIANT PAST, PRESENT DEGRADATION, AND HOPEFUL FUTURE.

In the course of a day or two, the whole of the shareholders in the unfortunate Russian Petroleum and Liquid Fuel Company, Ltd., will receive by post a most explanatory, and at the same time a very voluminous, publication, in which the company's brilliant past, its present degradation, and its hopeful future are described.

Never, it is safe to say, in a single instance has such an important and welcome publication been written in connection with the management of an English company, and it says much for the popularity and strength of the present agitation against the directors of the Russian Petroleum and Liquid Fuel Co. that the publication of the present historical and valuable pamphlet has been rendered possible.

The pamphlet has been written by a shareholder, and one who must of necessity have taken a most intelligent interest in the whole career of the company, and in order to avoid any misconception of facts, extracts from the speeches of the directors are given, as well as all matter pertinent to the questions dealt with. Thus the reader is enabled to obtain a thorough grasp of the entire situation, and so to form an opinion as to what is best to be done in the interests of the shareholders.

The mission of the pamphlet is clear. It will be issued with a desire to strengthen the hands of the agitation, and there can be no doubt it will fulfil its mission in the greatest possible degree.

In the short space at our disposal in these pages, it is of course next to impossible to give but a faint idea of the interesting nature of the publication, or of the many hard facts which the writer brings home to the directors.

Commencing his interesting history of the company, the writer points out that in the last decade of the nineteenth century, there was in Holland a company called the Royal Dutch Association for the exploitation of oil wells in Dutch India, the wells being principally in the island of Sumatra. The agents of that company in London were Messrs. Ogilvy, Gillanders and Co., East India merchants, of 67, Cornhill, and Messrs. Ogilvy, Arbuthnot and Co., in certain cities in India. The members of the London firm were principally Messrs. Gladstone (six in number), there being no Gillanders.

Messrs. Geo. Tweedy and Co. at the same period carried on business in London as oil brokers and steamship agents, having a branch office in Odessa, Russia.

In 1897, a syndicate, of which Messrs. Gladstone formed a part, and practically controlled it, bought for £529,100 from a Mr. Tagieff, certain oil fields in Russia, and subsequently promoted the Russian Petroleum and Liquid Fuel Co. The property was sold to the company for £900,000, shewing between the purchase and sale a gross profit of £370,000, out of which had to be paid the expenses entailed in negotiations for the purchase and sale. Messrs. Gladstone's share of the net profit was £20,000 in cash and £36,000 in shares.

The capital of the new company was £1,200,000, but at first £200,000 of the ordinary shares remained unissued.

The author of the pamphlet then proceeds to give the names of the first directors and the remuneration it was

arranged they should receive, and comments upon the prospectus. In that prospectus, he says, stress was laid upon the extensive and ready market assured in Russia, and in departing from this foreshadowed course of trading, by association with other companies, by complications and entanglements arising therefrom in endeavouring to enter foreign markets, the trouble both past and present was caused.

When the company was in a position to commence business, continues the writer, Mr. Tweedy was engaged as their agent to go to Baku and take possession of the property. Mr. Tweedy remained in Baku about two months, appointing local managers, engineers, and other employés, and upon his return to London, so well were the directors satisfied with his achievements, that they requested him to go out once more in the early part of 1898 again in the capacity of their agent.

After sundry other visits, an arrangement was made with Mr. Tweedy whereby he joined the board, and accepted the position of managing director, his remuneration to be £1,000 per annum and one per cent. of the profits. Mr. Tweedy's managing directorship commenced in October, 1899, and ended in 1904.

At the beginning, the accounts of the company were made up to September 13th each year, and for the ten months ended September, 1898, the directors declared a dividend of 42 per cent. At this point Lord Stalbridge, who had officiated as chairman, retired from the board, and the Hon. Evelyn Hubbard became chairman of the company.

During the years 1898-1901, the trading of the company was most successful, dividends of 42, 20, 50 and 30 per cent. being paid for the respective years, the £1 shares at one time changing hands at 60s.

The writer, at this juncture, devotes attention to the most eulogistic terms in which the services of Mr. Tweedy were referred to over and over again by the chairman of the company, and goes so far as to quote their exact words at various meetings of which he also gives the whole of the dates. For instance, speaking at the second meeting, the chairman said Mr. Tweedy had saved the company a very large sum of money by the extreme energy he had shewn in dealing with the fountains when he first went out.

Sir James Kitson, then one of the directors of the company, also bestowed upon Mr. Tweedy high praise for the measures he had taken in the re-construction of the works after the fire, mentioning that what he had done was most judicious and creditable, for in re-constructing the works in a short space of time, the shareholders had had the benefit of the production of oil at a much earlier date. Again, at another meeting, the chairman bestowed considerable praise upon Mr. Tweedy for his personal initiative and energy, to which, he said, was due the satisfactory development of production which was recorded that day.

It was in 1899 that the directors made a departure from the course of business foreshadowed in the prospectus. The Royal Dutch Co.'s supply of oil had fallen off considerably, and so to make up for this deficiency

they entered into a contract with the Russian Petroleum and Liquid Fuel Co. (as well as with the Baku company) for the supply to them of Russian oil, under a pooling arrangement, whereby the Russian company had to supply £10,000 of capital to bear a large portion of the expenses of the Royal Dutch Co.'s installation, and of their trading establishments in the Far East. To this contract Messrs. Ogilvy, Gillanders and Co. were parties. They were to be managers of the pooling business (Eastern Oil Association), and were to be paid sundry commissions, one of which was dependent on profits. The capital supplied by the parties to the agreement, aggregating £40,000, was apparently to be deposited with them, and they were to pay the hire of the steamers carrying the oil to the Far East and other expenses incidental to the steamers, but so much of the capital as was not required was to be used or invested as they should see fit, and upon this they were to pay interest at the rate of 3 per cent. per annum.

At this time one large shareholder spoke strongly against this step, and predicted that ruin must eventually come if the company attempted to enter into such complications as joining hands with a foreign company whose interests were entirely antagonistic.

The Hon. Evelyn Hubbard was without doubt under the belief that the arrangement would be satisfactory, for in December, 1900, he reported to the shareholders that he had been assured the business had so far been attended with success. The following year, however, he had to admit that the profits were practically wiped out, and that the company had the satisfaction of getting back the whole of their capital with 5 per cent. interest.

The author of the publication now proceeds to describe what was referred to by the company's chairman as a crisis, that being the period when the price of oil fell to under 10 copecs per pood. This was about 1900-01, yet, notwithstanding the reduced prices, a dividend of 30 per cent. was declared, this fact speaking well, as the chairman put it, for the inherent strength of the company's position. During the year 1901-02 the price again dropped, this time to 6.45 copecs per pood, yet, though the earnings were considerably less, a dividend of 15 per cent. was paid.

We then come to one of the most interesting portions of the publication—it is that part which deals with the purchasing of the refineries and the arrangements made for the distribution of the Russian Petroleum and Liquid Fuel Co.'s products in Russia. The writer points out in detail the various steps that were taken in this matter, mentioning that at first this branch of the company's business was not under the management of Mr. Tweedy, and unfortunate and unprofitable arrangements were made in connection with distributing the oil, but as other branches of the business were very profitable, nothing of this (he continues) was made known to the shareholders. Later on, Mr. Tweedy took charge of the department, but notified the board that he could not accept any responsibility for the contracts previously made.

The deal which was entered into by the company with the Consolidated Co., and against which Mr. Tweedy strongly protested, is given in detail, the various communications passing between Mr. Tweedy and the company being re-produced, one of these containing the now well-known warning in which the company's managing director said, "It is a hazardous gamble in the present state of affairs." It was at this point that Mr. Tweedy resigned and there came a change of

management. What has passed since, has for the most part been brought out at the recent meetings held by the gentlemen who are now conducting the well organised opposition to the board.

Not satisfied with the blunder which the directors had made against all the advice of experience, they further make disaster the more sure by entering into the Nobel-Mazout contract. Upon this subject as upon many others, the writer of the *brochure* displays the care with which he has compiled his work. His comments, too, are very pointed. In one instance, after giving *in extenso* the words of the company's chairman upon the working of these several agreements (words in the which Hon. Evelyn Hubbard asked the shareholders to have patience to see another act through), he concludes with those well known words, "Hope tells a flattering tale, delusive, vain and hollow."

Pursuing his story, the author recapitulates the many unfortunate occurrences which followed in the train of Mr. Urquhart's management, giving chapter and verse in every case, and then reminds his readers that three years have passed since the shareholders were asked to have patience only to see another act.

Yet things have gone from bad to worse, until last year the company made a substantial actual loss upon their business. Then the author asks: What is to be done? He immediately supplies the answer. The shareholders—large and small—must combine, and by an overwhelming vote insist that an independent committee chosen by themselves shall be empowered to prove to the bottom the cause of the present degradation, and formulate a scheme whereby the enterprise may be put upon a thoroughly sound business-like basis, free from entangling contracts, and worked for the benefit of the shareholders only.

The author concludes by reproducing a leading article from a recent issue of the PETROLEUM REVIEW, in which we dwell upon the way success was turned to failure by sheer bad management.

We can only hope that the perusal of the publication will result in strengthening the hands of the agitation to the extent desired; but one thing it is certain to accomplish, it will shew to all and sundry, not by general statements, but by detailed facts and figures, how the company has been brought to the verge of ruin by utter lack of competent leaders.

PRODUCTION OF DUTCH-INDIAN COMPANIES.

The production of crude oil by the East Borneo Co. in September amounted to 10,500 tons, against 10,900 tons in July. The total production for the first nine months of 1907 was 75,150 tons.

The production of crude by the Tarakan Petroleum Co. amounted in August to 1,600 tons.

The production of refined oil by the Dordtsche Petroleum Co. in September amounted to 184,000 cases. The total output in the first nine months of 1907 amounted to 1,411,200 cases.

The production of crude oil by the Royal Dutch Co. on the properties of the Perlak Co. in Sumatra in the first nine months of 1907 amounted to 186,171 tons, and the amount of royalty payable to the Perlak on this is 469,429 florins.

The production of crude by the Moeara Enim Co. in August amounted to 11,700 tons, whilst for the first eight months of 1907 it was 99,400 tons.

The production of illuminating oil by the Moesi Ilir Co. in August amounted to 35,000 units, and for the first nine months of 1907 it was 210,016 units.

INTERNATIONALE BOHRGESELLSCHAFT A.G. OF ERKELENZ, GERMANY.

The accounts of the above company for the financial year ended 30th June, 1907, shew a gross profit (including last year's balance, 6,149,861 marks) of 10,964,330 marks, against 18,338,114 marks in the previous year. The appropriation of the profits was as under:—

	1906-7. Marks.	1905-6. Marks.
Amount written off for depreciation and reserve.. ..	1,906,477	3,834,850
Net profit left	9,057,853	14,403,263
500 per cent. dividend on capital of 1,000,000 marks	5,000,000	5,000,000
Directors' remuneration	388,219	1,203,402
Extra allowances to employés	200,000	200,000
Balance carried forward	3,469,636	6,149,861

In the financial year 1905-6 there was also written off 700,000 marks for special reserve fund, and 250,000 marks for plant renewals, and 1,000,000 marks for the creation of a fund to be employed for the benefit of the employés and workmen.

This year's result must also be designated as brilliant, although, of course, the largest part of the gross profit came from last year's proceeds, when the company reaped the fruits of many years' strenuous and careful labours. The company then sold 250 mining properties situated in Westphalia and on the Lower Rhine, which during a period of 10 years they have acquired and tested by drilling, for 35,000,000 marks to the Rhenisch Westphalian Mining Co., of Mulheim a/d. Ruhr. Of this 15,000,000 marks became due on the 1st of October, 1905, whilst the remaining 20,000,000 marks are to be paid out in eight yearly instalments.

Of the previous year's gross profit less than a third was distributed as dividend, more than a third was applied for writing off for reserve and depreciation and for creating a fund in aid of employés, whilst about a third was carried forward.

The gross profit for the year 1905-7, independent of last year's balance, of course, falls much below the preceding year. It nevertheless amounted to 4,814,469 marks, or nearly five times the share capital. This profit is chiefly made up of the surpluses realised by the sale of the Lorraine coal fields to the International Coal Mining Co. firm in St. Avold. Apart from this, the strenuous boring operations carried on in Germany and abroad must likewise have yielded considerable profits.

BATÓUM EXPORT TRADE DURING AUGUST.

Whilst the general turnover of oils at Batoum in August was maintained at an average level, the export of kerosene shewed some improvement. Large bulk cargoes were shipped to Great Britain and other European countries, shipments of case oil also rose up to 600,000 poods, the largest part of which consisted of large cargoes of case oil. A greater development of the case oil exports was prevented by the prices ruling for kerosene at Baku, *i.e.*, 44 to 46 copecs per pood. Operations in lubricating oil proceeded in a normal course, and the arrivals from Baku increased, especially

in the case of machine oil, the arrivals of which were double those of July.

The following are the figures of arrivals at and shipments from Batoum of various petroleum production in August, also the stocks on September 1st:—

	Arrivals. Poods.	Shipments. Poods.	Stocks on Sept. 1st. Poods.
Refined Kerosene ..	1,473,000	2,563,000	2,636,000
Solar Oil	60,000	—	52,000
Machine Oil	822,000	508,000	1,035,000
Spindle Oil	102,000	57,000	88,000
Cylinder Oil	14,000	27,000	21,000
Vaseline Oil	—	39,000	12,000
Lubricating Distillate ..	—	—	12,000
Residuals	166,000	84,000	196,000
Total	2,637,000	3,278,000	4,052,000

Of the total quantity of refined kerosene delivered at Batoum from Baku in August 295,000 poods came in tank waggons, and the rest by pipe line.

The small arrivals of kerosene, coupled with a comparatively large export both in bulk and cases, reduced the stock of this product to 2,636,000 poods, or by 30 per cent.; on the other hand, the stocks of lubricating oils, thanks to increased deliveries from Baku, rose to 1,168,000 poods, or by 40 per cent. For some months kerosene distillate has been entirely absent from the shipments, which shews itself in the remarkable decline of shipments to France, which now consist of lubricating oils only. The shipments to France in August amounted to 262,000 poods, and a similar quantity was shipped to Germany.

Shipments to England amounted to 1,227,000 poods, which has been the normal level for some time. There has been a marked decline in exports to Belgium and Dutch ports, which together took 408,000 poods. The export to Alexandria is kept up in bulk shipments, the oil being packed in cases at the local case factories. In August there were shipped two cargoes of an aggregate of 324,000 poods. For home ports there were also two cargoes aggregating 204,000 poods. The whole of the case oil exported went to Turkish and Balkan ports, the total quantity being 618,000 poods.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended September 28th, was 266,000 poods, or 4,288 tons; and for the week ended October 5th was 295,000 poods, or 4,756 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended September 29th was 233,000 poods, or 3,757 tons; and for the week ended October 6th was 232,000 poods, or 3,740 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 29th September was 157,935 poods, or 2,547 tons; and for the week ended 6th October, 153,840 poods, or 2,481 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 29th September was 126,556 poods, or 2,040 tons; and for the week ended 6th October was 135,617 poods, or 2,186 tons.

To Readers.—Readers are requested to see that they receive with each copy of this week's REVIEW the usual half-yearly index in the form of an eight-page supplement. In case of the non-receipt of the index, readers are asked to kindly communicate with the publisher.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	5 ³ / ₈
Baku Russian Petroleum ..	£750,000 Ord.	£1	3/0-3/6
	£650,000 5½% Pref.	£1	5/3-5/9
Bibi-Eybat Petroleum Co. ..			5/6-6/6
Californian Oilfields ..	£250,000 Ord.	£1	5 ¹ / ₈ -5 ⁹ / ₁₆
Commonwealth Oil Co. Pref	18/- paid up (Prem.)		1 ³ / ₈ -1 ⁵ / ₈
	Def. £1 fully paid		1 ³ / ₄ -1 ⁷ / ₈
European Petroleum ..	£550,000 Pref.	£1	1/0-2/0
"	£550,000 Ord.	£1	0/6-1/6
"	£376,000 Deb.	£100	73-76
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	4/0 5/0
"	£600,000 Ord.	£1	3/0 4/0
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	1-1 ¹ / ₄
"	£575,000 Ord.	£1	2/3-2/9
Shell Transport & Trading ..	£2,000,000	£1	2 ¹ / ₄ -2 ³ / ₈
"	£1,000,000 Pref.	£10	9 ⁷ / ₈ -10 ¹ / ₈
Spies Petroleum Company ..	£312,500	10s.	6/6-7/6

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Oct. 7th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	523	527
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,400	4,425
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	156	158
Neft Co.	250	—	—
Nobel Bros.	5,000	10,450	10,500
"	250	517 ¹ / ₂	—
Rops and Co. V... ..	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading			
Co.	250	—	—
" (Second Issue)	250	—	—

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 2s. od.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 5s. od.
Burmah Oil, Ord.	£1,100,000	£1	£3 6s. 9d.
Do. Pref.	£250,000	£1	£1 5s. 6d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	£6 16s. 6d.
Do. 5% Pref.	£18,900	£7	£4 13s.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 17s. 9d.
	(17s. paid)		
Pumpherton Min. Oil Co., Ltd., Ord.	£110,500	17s.	£12 13s. 9d.
	(17s. paid)		
Do. 6% Cum. Pref.	£100,000	£10	£13 5s. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£3 os. od.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 12s. 6d.
Do. "B" Deb...	£150,000	£100	£170.

DUTCH COMPANIES.

Company	Latest Quotations (per cent.)	Florins.
Arnhemsche Petroleum Mij.	50	1,000
Aurora (Deb. 5%)	90	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	124	50
" (Deb. 4½%)	100	1,000
Gaboes	2 ¹ / ₄	—
Holl. Rumeensche Petroleum Mij. ..	25	1,000
Int. Rum. Pet. Mij.	91	500
Java Petroleum Mij. (Ord.)	—	1,000
" (Pref.)	—	—
Koninklyke Nederl. Pet. Mij. Shares ..	282	250-1,000
" Share certificates ..	275 ³ / ₄	1,000
Mœara Enim Petroleum Mij.	129	100
" 1-1,000 Oblig. 5	—	250-1,000
" Moesi Ilir " Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij. ..	—	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	—	—
" (Deb. 5 %)	—	—
Panolan Maatschappij Cert.	290	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	127	1,000
" (Common)	—	—
Sumatra-Palembang Petroleum Mij ..	90 ⁷ / ₈	500
Tarakan Petrol Mij.	40	—
Zuid Perlak Petrol. Mij. (Pref.) ..	97	—

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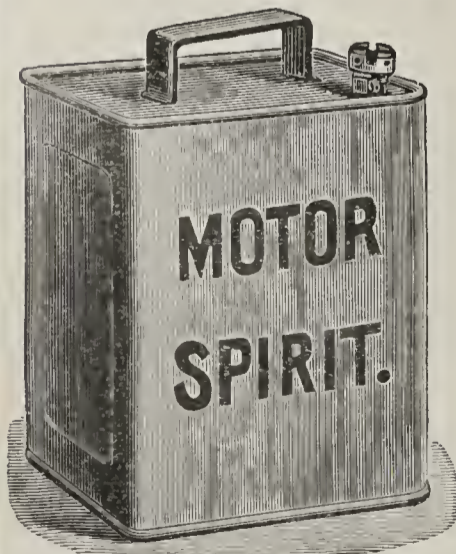
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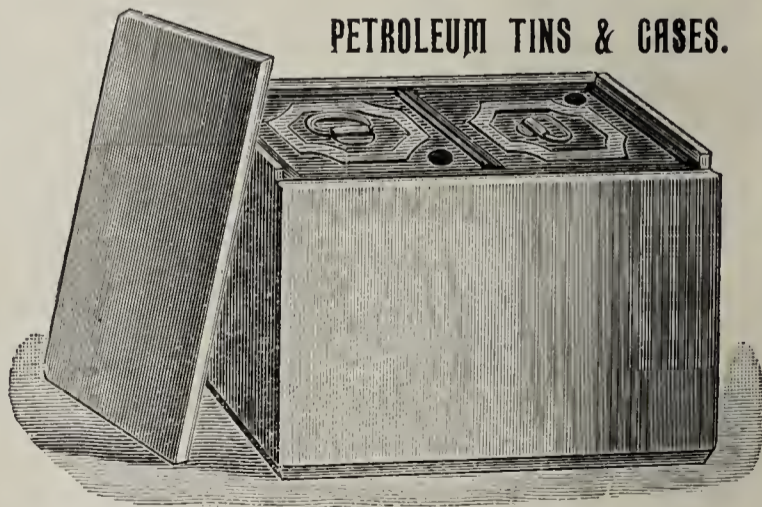
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SATURDAY, OCTOBER 12TH, 1907.

A STRAIGHT TALK UPON THE AGITATION.

IT is more than passing strange that while we have become accustomed in the columns of our daily press to read articles of almost interminable length upon the question of American trusts and the methods by which they are controlled, our journals one and all are silent upon a question which is of vital interest to many thousands of investors in our land—we refer to the position of shareholders in public limited liability companies.

When things go well and dividends come along, the position of the shareholder calls for no comment, but more often than not, things do not run with that smoothness which is suggestive of success, and it is particularly at such times that the shareholder, finding his security is becoming remarkably small, discovers that he is absolutely under the thumb of the director, and that most, if not all, of his independence has vanished. One, perhaps, would not mind so much if the directors of many of these public companies had the true interests of the general body of shareholders at heart, and also possessed an intimate knowledge of

the business they took in hand. But more often than not, the directors are chosen by the promoters of the company, and so while the small investor finds the money for the promoter, the promoter brings forward shall we say "eminent gentlemen in the City" who assist him in pulling the strings the desired way. As for the shareholder, he is that unlucky individual who has little or no redress. True, once a year he has a perfect right to go to the annual meeting and there after listening to a cut and dried statement, more or less of fact, he can, if he so wishes, raise his voice against this or that. But even if he be in the right, he generally comes off second best, and thus it is that for the most part shareholders prefer to remain silent, and let the directors—those at the helm—have everything in their own hands.

To our mind it does seem a most unsound principle that those who provide the finances are not able to call the tune, yet it is a generally accepted rule that company promoters find the directors, and the investor, the money. This principle is very forcibly illustrated in the Anglo-Russian petroleum companies—the Russian Petroleum and Liquid Fuel, the Schibaieff, the Baku Russian, the European, etc.

Without exception, these companies were all floated under similar conditions—the purchase consideration of the company for the properties acquired has been in most cases about double that originally paid by the promoters. Thus, then, before the company is actually in working order, the promoters have "romped home" with enormous profits. This of course to our mind is far from honest, yet perhaps it would lose much of its ugliness, if only the promoters directly interested themselves in the position of the shareholders and the future success of the undertaking they have launched. The first way they could do this would be by allowing a substantial balance to remain as working capital after providing for the purchase of the properties, but they prefer to do otherwise, or their chances of securing a huge profit on the transaction would become somewhat remote.

The majority of the companies, therefore, from their inception are in that awkward position of having very little working capital, and this circumstance is aggravated by reason of the fact that the board of directors is generally by no means a thoroughly competent one. The directors have their own interests to watch, for in many companies, and we will put it mildly, theirs is a game of plunder.

As is well known, success is at all times difficult to attain, and with little spare capital, it requires a very good managerial hand to pull round an undertaking to that position when it can afford to pay dividends upon its watered capital. But here again the general welfare of the shareholders scarcely fits in with the policy of the directors. If a thoroughly experienced manager is provided, and one who knows his business from A to Z, their little game will before long be up, and consequently no matter at what cost, they must see that matters are arranged so that the company's purse strings can be pulled in their direction.

The pamphlet, of which we give extracts in another

part of this issue, shews how the promoters of at least one Anglo-Russian company, not being satisfied with the large profits they had already made at the floatation of the company, used every possible means to turn the operations of the concern to their own benefit by taking what cannot be otherwise than secret commissions, and in these transactions having a clause in the articles of association to back them up. It is surprising that company directors should stoop to such miserable actions, yet that they have had these in mind from the inception of the company is shewn by that provision in the articles of association, which makes their position at least not opposed to policy.

But the pains and cleverly manipulated tactics of the directors of the Russian Petroleum Company, and also the Schibaieff Co. to prevent the possibility of their plans being foiled by dissatisfied shareholders, will come to the majority of people as an even greater surprise.

Let us explain this ruse of the Russian Petroleum and Liquid Fuel Company directors. It was important that they should retain a certain strength of voting power, and so they formed a subsidiary syndicate in Holland for the purpose of getting rid of a number of the company's shares on the Dutch market, yet in such a way that the holders of those shares should have no standing in regard to a vote. Bearer scrip was issued to the Dutch clients, shewing that the holder is the owner of so many shares, but if he wished to have the actual certificate, then he must pay a certain commission to the syndicate. Thus we have in the Russian Petroleum and Liquid Fuel Co. the *Allgemeine Kantoer*, in whose name 360,000 shares stand, and the voting power upon these shares is placed at the disposal of the original promoting group, although it may be that syndicate has not in reality a single one of those shares.

In the face of such a circumvention of the law, it is obvious that it is next to impossible for any agitation to make tangible progress when it comes to the question of voting. But the present agitators, however, are to see what they can do to remove this hindrance to progress, and so by means of an announcement in the Dutch newspapers (for the names of the real holders of the stock do not appear in the company's shareholders' book), an effort is to be made to reach the Dutch holders, so that they, too, may see how they have been duped.

This matter is naturally attended with considerable difficulties, and necessitates the expenditure of a not inconsiderable sum of money. It may succeed: we hope it will, but day by day we are the more impressed with the advisability of a speedy remedy being found by appealing for a Board of Trade enquiry.

Such an enquiry would bring the numerous wrong doings to light in all their ugliness, and once and for all prove beyond any possible shadow of doubt to what extent the shareholders in this company have been the victims of wholesale trickery. The harm has not been done to them alone, for its effect has spread to the furthest corners of the world of petroleum finance, and can one wonder that to-day the investor pauses before he becomes interested in anything associated with the name of petroleum?

The Russian Petroleum Industry a Quarter of a Century Ago.

A LUCID ARTICLE DEALING WITH THE EARLY STRUGGLES
OF PRODUCTION AND REFINING.

By
Dr. DVORKOVITZ,
Published
twenty-two years ago
in the
"Russkia Viedomosti."

There are not many industries on which so much labour, energy and money has been expended as on the petroleum industry, and nowhere has Russia's incapacity for management been so strikingly demonstrated as there. The history of the petroleum industry in Russia is very instructive. It shews us that we are still far from grown up to a sensible understanding and appreciation of a manufacturing industrial business, that we are unable to create an industry on a rational basis, and lastly that we shall have yet for a long time to learn from our western neighbours.

I have had occasion to personally acquaint myself with the petroleum industry in Central Russia as well as at Baku, and I think that a truthful exposition of the condition of the petroleum industry may possibly be of assistance—if not to those who have already lost all their capital, then at least to those capitalists who still have the intention of investing capital on the establishment of petroleum refineries at Baku.

The Baku petroleum producers and refiners with pride point to their services in the development of this young industry in Russia. And, in fact, with astonishment we behold the enormous amount of money and energy sunk into this industry, which has developed with giant strides. It is difficult to imagine that Baku, which only ten years ago was an unknown small town of 10,000 inhabitants, has now become the object of attention, not only of the whole of Russia, but throughout the world.

For instance, one of the largest petroleum firms in the world—the Standard Oil Co.—every year sends its agent to Baku to ascertain the course of the development of our crude oil and kerosene business and to what extent we can become dangerous as competitors on the European markets.

A large number of important European firms are also sending their engineers to study the condition of our industry, while last year there stayed for quite a considerable time in Baku one of the most well-known correspondents of the American paper, the *New York Herald*.

The rapid growth of the importance of our petroleum fields at Baku is the more astonishing, as no other industry has developed in Russia under such conditions. Usually, the Government has been, and is, granting all possible privileges to various persons desirous of engaging in one or other branches of a manufacturing industry. The Russian Government did not stop even at direct and indirect expenditure for the purpose of upholding various branches of industry—and as an example, I may mention the sugar and rail industries—in Russia. For the upholding of the latter the most vital interests of the consumers were ignored. For tens of years we have been paying away much money in the

form of direct and indirect subsidies—paying three times dearer for products of national industries. At a time when we could have obtained foreign sugar for three roubles we were paying for our own sugar eight roubles per pood.

What the national rail industry has cost us would be difficult to reduce to figures. There is one thing only which can be said with certainty: that had we bought foreign steel rails, our railways would not have cost us anything like the price, and the Russian peasant would have been able to travel on them, and not have to walk seeking work for hundreds of versts, owing to high railway rates.

But a quite different lot has been dealt out to the petroleum industry. From the day of the conclusion of the treaty with Persia, in October, 1813, by which Russia regained possession of the Khanates of Derbent, Kuban and Baku, the Government looked upon the petroleum industry only from the point of view of revenue. Caring only for its revenues, it thought only of the best method of collecting them, and therefore at one time resorted to the farming out of the petroleum wells to private persons, and other times exploited them itself.

It is clear that there could be no idea of further developing the petroleum industry. The whole business was limited to the baling of crude oil from the existing hand wells, and quite naturally the revenues were decreasing each year, and in such cases when they undertook the production of oil itself, it always suffered loss. Finally in 1850, the Government decided to hand over the petroleum and salt businesses to a concessionnaire. But here again the expectations that in private hands the petroleum industry would develop were not realised. The reason is that the concessionnaire who received the concession for the petroleum production only for four years did not feel justified in spending capital in searching for new sources or deepening the existing hand wells. Thus the petroleum industry developed very slowly, and barely dragged on an existence.

At the same time, however, American kerosene began to spread rapidly not only in Europe, but also in Russia. The users of the new light began to grow not by the day, but by the hour. Russia's wealth of oil, for fiscal objects, was doomed to lie idle, and it might have continued so to the present, but for the coming forward and powerful word of a man of science—Prof. D. I. Mendeleeff. His name was already known throughout Europe, and already he was the pride of Russia, but if he is dear to us as a man, who has raised high the banner of science, he should be doubly dear to us as a man of science who was the first to extend a helping hand to Russia's refining industry. Even now there are still complaints made all round that men of science

are keeping aloof from life. Even if these complaints are justified, the blame for this chiefly falls on our capitalists, who ignore science in general, and Russian science in particular.

The petroleum industry has so far shewn, and is shewing, that only by following the directions of science can we reckon on the establishment of a rational manufacturing industry. In 1867 Prof. Mendeleeff came forward as a determined advocate of the abolition of the farming system in the petroleum industry. The weighty word of the scientist compelled the attention of the Government. A commission was appointed which was to elaborate the details of the abolition of the farming system. In 1872 the farming system was abolished, and the Baku oil fields were sold to private persons. To what extent the handing over of the oil fields to private persons was advantageous to the Government may be hereafter judged. The Government by farming out the oil fields was in receipt of a yearly revenue of 50,000 roubles, by the sale of the fields for 24 years the Government received 3,000,000 roubles, which works out at 125,000 roubles per annum, apart from interest on the capital, which will bring the amount up to 150,000 roubles per annum. But apart from this, the petroleum industry was given a great impetus, as the owners of the fields were compelled to start exploitation within two years. Feverish activity commenced at once. At the time of the sale of the lands in the Baku district there were in the Balakhany-Saboontchi field only 126 hand wells and one borehole. The production of petroleum from hand wells was very disadvantageous, as the quantity obtained was very small, and the production was carried on by a primitive method, *i.e.*, by baling with leather bags, and was rather costly. With the abolition of farming, boring instruments began to be applied in an increasing manner, so that towards the end of 1873 there were already at Balakhany 17 boreholes. The rapidity with which the petroleum producing industry was developing may be seen from the fact that in 1874 there were already 50 boreholes yielding 5,000,000 poods of crude oil; in 1875, there were 65 boreholes; in 1876, 101 boreholes; in 1878, 301 boreholes; and, lastly, in 1885, there were more than 400 boreholes, from which there were obtained annually about 100,000,000 poods of crude oil.

But the Government, notwithstanding the very advantageous sale of petroleum lands and the benefits which the petroleum industry could confer on the whole of Russia did not wish to renounce their view, once taken up, on the petroleum industry as a source of revenue, and in consequence of this imposed an excise duty on the output of kerosene from the crude oil, and the duty was a heavy one. This duty was levied on the stills according to their size and time of working, and this duty naturally acted as a powerful check on the development of the refining industry. The refiners hurried their distillations, frequently spoiling the kerosene, and the goods put on the market were of such a nature that the Russian consumer would not buy the oil but used the more expensive American kerosene. Owing to the excise formalities and various restrictions, in 1875, out of 140 refineries which existed at Baku, 100—*i.e.*, 70 per cent.—were compelled to cease operations, and this forced the Government to give its attention to the matter. Here, again, to the aid of the industry which was almost killed in its inception, came forward Prof. Mendeleeff, who had personally acquainted himself with the petroleum industry in America as well as at Baku.

(To be concluded.)

RUSSIAN AND ROUMANIAN NOTES.

Fire.—A derrick of the Steaua Romana, at Bustenari, was struck by lightning and caught fire, which spread to an adjoining installation. The damage done is considerable.

Baku Production.—The production of crude oil at the Baku oil fields in the first 15 days of September amounted to 18,241,447 poods, of which 5,941,389 poods were produced at Bebe-Aibat.

Another Roumanian Spouter.—At Bucea, in the Campina district, the Steaua Romana's well No. 111 has struck oil at a depth of 182 metres. The well is now spouting, yielding about 200 tons daily.

A Prolific Producer.—The borehole of Mr. George Stroe, situated in the lower part of the Bustenari oil field, is producing 80 tons daily. Messrs. Ruzicka, Elias and Taubes have started drilling in the same locality.

A Weak Market.—According to telegraphic reports from Baku the market in crude has somewhat weakened. Work at the oil fields is in full swing with the exception of the Caspian Society, where the strike of workmen continues.

Roumanian Activity.—Considerable boring activity prevails at Tzintea. The Steaua Romana are pushing forward their boring, whilst Messrs. Ruzicka, Elias and Taubes have started recently two boreholes, which are gaining in depth very rapidly.

Very Significant.—Reports are current in Russian oil circles that the Caspian Society intend to withdraw from the home markets, which, after the withdrawal of the Mantascheff Co., will leave the Nobel-Mazout Syndicate in sole control of the petroleum trade in all the principal centres of Russia.

Drilling at Moreni.—Mr. Campeanu's well at Moreni (Roumania) has reached a great depth, but is now obstructed with sand. When the sand has been cleared out drilling will be continued. The well, which the Hamilton Syndicate is drilling at Bana-Moreni, is being deepened, and has now reached 825 metres; it is intended to go as far as 1,000 metres.

Oil versus Coal.—Shipowners on the Neva recently met to discuss the fuel question. Lately, the price of foreign coal in St. Petersburg has been rising steadily and threatens to go up to 25 copecs per pood. The question of adopting liquid fuel was considered, but the majority of shipowners are deterred by the outlay required for adapting their ships for such fuel.

Batoum Export Trade Very Slack.—According to a report from Batoum, dated 29th September, bulk oil shipments have again become rare, and go chiefly to out-of-the-way places such as Tunis and Algeria. The demand from Europe is small. The leading exporters are bringing up very little oil from Baku, either because there is none available, or because there is no demand for it at Batoum.

Manœuvres Cause Dislocation.—The grand manœuvres, which are now taking place in the Dobrogea, are causing some inconvenience to the petroleum trade, as the port of Constantza has been declared closed both from land and sea, which prevents the arrival of oil carrying trains and the entry of tank steamers for cargoes. This, however, will last but a very short time, as the manœuvres are now coming to a close.

A Good Year.—The Russo-American Petroleum Manufacturing Co., having its head office in Moscow, in the financial year 1906-7 had a total revenue of 1,723,458 roubles and an expenditure of 1,665,377 roubles, leaving a profit of 58,081 roubles. Of this sum, 32,461 roubles was written off for depreciation and insurance funds, whilst a sum of 22,500 roubles was distributed as a 6 per cent. dividend on the capital of 375,000 roubles.

The Disconto's Enterprise.—The petroleum enterprises of the Disconto group are preparing for a great development in their operations. The Credit Petrolifer is laying a new pipe line from Bustenari to Baicoi and Ploesti. The number of tank cars employed by the Vega and other refineries is being greatly increased, and the export installations at Braila and Constantza are being enlarged. At the Vega refinery the plant is being extended, a fifth railway siding is under construction, new storage tanks are being erected, and the building of a cooperage has commenced. A special plant is being laid down for the manufacture of lubricating oils from residuals. All these works are estimated to cost 1,400,000 francs.

OUR AMERICAN LETTER.

PITTSBURG, *September 26th*, 1907.

Since my last letter to the REVIEW the fields have witnessed an increase of activity, and to-day lower south-west operators are to be commended for the energy they are putting forth to secure an increase in production. Throughout the entire lower south-west there is no indication of a drop in development work or the search for new producing territory. With the work now under way and starting there is every indication that the present activity will continue throughout the winter. Even after that there will not be an abandonment of development work if the inducements remain as great as now.

There is little hope of finding prolific producing territory, but there is still much old territory that can be developed, and there remains the possibility of finding new. The development of a new field would put new life into operations and the activity would continue well into the winter, even though the conditions were not the most favourable.

Despite the fact that the production of the western fields is enormous, the market price nor the demand for high grade crude, such as the eastern fields supply, has been effected. In a way, the western product takes the place of the eastern grade, but fortunately it has not caused the latter to depreciate in value. There is room for conjecture as to what would now be the market price of Pennsylvania crude had it not been for the opening of the floodgates in Illinois and the two territories. Two years ago no one anticipated a volume of new production from the west such as now exists. They are innovations that have taxed the transportation companies far beyond their increased capacity for handling the production.

The completion of the two trunk lines, the Gulf and Texas, from the Territories to the Gulf of Mexico in south-eastern Texas, will afford some relief in the way of transportation and marketing the oil. Still there will remain a large overproduction that cannot be cared for at the present time. By some it is claimed that the production of the Mid-Continent fields is 200,000 barrels a day or would be if the wells were permitted to produce to their full limits. Granting the figures to be approximately correct, the Prairie Oil and Gas Co. is handling more than 100,000 barrels and the two Gulf lines handling something more than 30,000 barrels a day, there is still a large surplus that cannot be taken care of at this time.

It seems almost incredible, but it is nevertheless true, that the production of the Illinois field is now greater than Pennsylvania, West Virginia, Kentucky, Ohio and Indiana combined. What is still more surprising is the fact that this enormous production has been created within a little more than a year. When developments first began in Clarke county, more than two years ago, the wells came in light, and it was some time before the field began to attract attention.

When development work was pushed to the south-west and south, into Crawford county, a deeper pro-

ducing formation was encountered, and with it some large producers. It was from this and Lawrence county that made it possible to send the production up by leaps and bounds, and finally get beyond the transportation and storage facilities, despite the strenuous efforts made to provide both.

Recently a new feature has been added to the Illinois field. The Ohio Oil Co. a few weeks ago, drilled a well on the Brant farms, located in shallow sand territory to a lower sand or pay, and got a gusher. The other wells got their oil at a depth of about 540 feet, but this was drilled deeper, and at a depth of 640 feet got another pay, and started to flow at a terrific rate, and is now two weeks old, and is still flowing at the rate of 1,200 barrels a day.

The Illinois field has furnished some surprises, among which this gusher is not the least. Other wells in the same locality have found the same pay, and are good producers, and will lead to drilling deeper in the upper end of the field in Johnston township.

In the eastern fields the only prospective new producing territory lies in Lincoln county, in the extreme lower South-west. The oil is found in the Berea grit formation, and so far no large wells have been encountered. Until two or more months ago the developments in this county attracted very little attention. The development work is located in the vicinity of Griffithsville in Duval district, and about all of the wells completed have been of the experimental kind, and the result shews six producers, several gassers and two dry holes. The producing wells have an average production of about 10 barrels a day. When first drilled in they have a larger production, but when they have settled down are about the average stated.

Up to the present time the Big Creek Development Co. has been the only operator in that section, but its success has been the incentive for other companies to try for production in that locality, and several other companies are starting new work. Should this new work prove satisfactory to the projectors, the prospects for increased activity in Lincoln county will be very good. The completed wells, after they have settled down to their normal daily production, are very steady producers, and even though they are small, will prove paying investments. Development work has not progressed sufficiently to preclude the possibility of finding much larger wells than have been discovered. So far the work completed has been scattered over a considerable acreage, and shews that the producing formation is not confined to a small area. In the way of new producing territory, the Griffithsville district can claim the distinction of being the only one of the year. With a measureable degree of success with the work now under way and starting there should be not less than 15 or 20 wells drilling and starting in the district within the next 30 days.

The fourth sand territory in Monongalia county has been one of the erratic developments of the year. These

are all deep wells, and their average size has not been large, while a good many have failed to find oil in paying quantities. The well that is making the best record at this time is the Manufacturers' Light and Heat Co.'s second test on the R. W. Whitlatch farm, located on the South Fork of Dunkard Creek. Its best day's production was a little more than 600 barrels. The first well completed on this farm is not better than a 30-barrel producer. It is such wells as this that have kept up active development work in the district during the summer. The South Penn Oil Co. has been the most active in the development of the pool, and, in addition to drilling a large number of new wells, has drilled a good many of the old from the upper to the lower formation. Some of them have produced as much as 300 barrels a day, and shewed creditable staying qualities. In new production the fourth sand territory has furnished a larger volume than any other district in West Virginia during the expired portion of the year. It is still quite active in development work, and there is still room for a number of locations.

While the Dunkard Creek district has been a success, the same cannot be said of the fourth sand development on Miracle Run in the same county. Early in the year the South Penn Oil Co. completed a large producer on the Fordyce farm, and it was thought it was the start of a new pool. In the amount of oil produced the Fordyce well will no doubt lead all others in West Virginia for the year.

The size and staying qualities of the Fordyce farm well were sufficient inducements for starting considerable new work in that locality. When the new wells were completed they proved to be light pumpers, and not a few fell to the duster list. The dusters had a discouraging effect on development work, and at this time there is very little work under way or starting in that district. The completion of a dry hole entails considerable loss, and even the larger companies are not drilling in territory of this kind without a greater assurance of getting producers.

Developments in the South-Eastern Ohio fields hold out very few inducements for an increase in operations.

Some of the defined districts shew considerable activity, but there are no new discoveries that warrant the starting of any considerable amount of new work. From present indications it looks as though the current year was to prove the least formidable in the discovery of new pools of any in the past decade.

In a number of localities new producing territory has been discovered, but the wells are light, and at any other time when new production was not so hard to find the territory would claim very little attention. In the Clear Fork district in Monroe county the best producers have been found, and in a few other districts an occasional good producer has been completed.

Washington county has completed more wells than any other county. The efforts to discover new pools have failed, and the work has been principally in old territory. The average size of the completions have been very light, and more dusters have been credited to that county than at any time since development work began.

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.)

APPLICATIONS FILED IN GREAT BRITAIN.

Improvements in the Manufacture of Oil and Greases.—Ernest Ridgill, Green Lane, Drinfeld, Derbyshire. No. 20059 of 1907.

Improved Means for Effecting the Ignition and Combustion of Liquid Fuel.—Philip Reilly, 22, Southampton Buildings, London. No. 20396 of 1907.

Improvements in Mineral Oil and like Burners.—Henry Dinsdale and Fawcett, Preston and Co., Ltd., 15, Water Street, Liverpool. No. 20712 of 1907.

Improvements in Refining Crude Petroleum and Other Hydrocarbons.—Wallace McMullen, 321, High Holborn London. No. 21060 of 1907.

Improved Explosive Oil and Process for the Manufacture of the Same.—Herbert John Haddan, 31, Bedford Street, Strand, London. (Julius Friedrich Lehmann, Germany. No. 21116 of 1907.

New or Improved Process for the Manufacture of Explosive Oils Containing Nitroglycerine.—Herbert John Haddan, 31, Bedford Street, Strand, London. (Julius Friedrich Lehmann, Germany.) No. 21117 of 1907.

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THE OIL FIELDS OF SOUTHERN CALIFORNIA.



Another
Important
Monograph.

(Concluded from page 189.)

In this sandstone also is well shewn the principal syncline of the region, which may be designated the Oat Mountain syncline, its western extremity lying in that mountain. Except for sharp, anticlinal crumples near its northern and southern edges, this syncline is comparatively symmetrical, the outcropping stratum in the trough of the fold being the uppermost shale of the Modelo formation. Immediately south of the southern anticlinal crumple is a second fault, designated the Sulphur Mountain fault, its trend being N. 60 deg. W., the direction of its hade doubtful, though perhaps to the south, the downthrow to the south, and the maximum displacement probably more than 1,000 feet. This fracture is traceable diagonally across Sulphur Mountain to the bottom of the Santa Clara Valley; it is also in direct with certain sharp crumples in Chaffee Canyon, south of the valley, to which, therefore, it may be structurally related. To the west the fault passes into the ridge running south from Oat Mountain, perhaps continuing to Sespe Canyon and merging with the San Cayetano fracture. Over this portion of its course, however, its identification is next to impossible, for the strata are but a succession of shales which may be either Vaqueros, Modelo, or both. These shales are of great thickness, and extend southward in unbroken outcrop to the Santa Clara Valley, only a narrow fringe of overlying pliocene separating them from the bottom lands for a mile or two along their front. The shales display a number of minor folds, but their predominant dip is northward. Just before passing beneath the pliocene, however, this seems to change to southward, more or less in conformity with that of the younger rocks. Across the Santa Clara Valley, but at a distance of nearly two miles, the probable upper members of the Sespe and lower members of the Vaqueros appear, but the intervening structure is unknown.

Hopper-Piru Fields.

The district discussed in this section embraces the territory contiguous to Hopper and Nigger canyons, the lower portion of Piru Creek, and its tributaries Modelo, Blanchard, Lime, and Reasoner canyons on the west and Santa Felicia and Holser canyons on the east. The topography, especially about Hopper Canyon, is very rugged, but considerable portions of the district are accessible over the roads which follow the canyons. Piru, at the mouth of Piru Creek, is the only town of importance in the district.

The oil wells of the Hopper-Piru district comprise

the San Cayetano, Sunset, Fortuna, Nigger Canyon, Modelo Canyon, Piru Oil and Land Company, and Holser Canyon wells. All but the last two groups are situated west of Piru Creek.

The productive wells of the Piru Oil and Land Company are located in the valley of Piru Creek, about two miles north-east of Piru. At present two wells yield oil and one water. They penetrate conglomerate and sandstone with some clay, which are believed from their fossils to be the Fernando formation. The general dip of the strata is from 45 degrees to 60 degrees or 70 degrees S. and the strike varies slightly on either side of east and west. The particular horizon in the Fernando is somewhat uncertain, by reason of the proximity of the wells to what appears to be a line of unconformity between this formation and the older Modelo beds. It is, however, undoubtedly well up in the Fernando, if the section across the hills in front of the wells and directly north of Camulos is to be taken as a criterion.

Less than half a mile south of Holser Canyon is one of the more prominent anticlines that have affected the Fernando formation east of Piru Creek. The continuation of this anticline to the west was not determined, but from its position and trend it may pass into the Modelo fold; on the other hand, like so many other folds in this region, it may spring from the system west of Piru Creek, but maintain an independent position east of the stream.

Two wells, the Ramona and New Camulos, are located a little south of the axis of this anticline, in tributaries of Holser Canyon, and north of the canyon, between half a mile and a mile north of the axis, is the Crown King. None of these wells has yet found oil. The rocks of Holser Canyon are conglomerate and sandstone, with local beds of argillaceous shale. Some of the sandstone shews the presence of a considerable amount of bitumen throughout its mass and it is probable that drilling operations are conducted here on this account.

Oil Fields South of the Santa Clara.

The oil fields south of the Santa Clara River involve an area having an east-west length of 29 miles and a width of from one-half mile to four miles. For convenience of discussion the territory is divided into four fields which lie at varying intervals along the front of Oak Ridge and the Santa Susana Mountains, none being yet developed on the slopes of South Mountain. Enumerated from west to east they are the Barsdale and the Torrey-Eureka-Tapo fields, on the north flank of

Oak Ridge; the Pico field, comprising Pico, Dewitt, Towsley, Wiley, Rice, and East Canyons, along the Santa Susana Mountains; and the Elsmere field, containing the Elsmere and Placerita wells, on the spurs of the San Gabriel Range.

The fields are developed along the axes of the Oak Ridge, Torrey, Eureka-Tapo, Pico, and Elsmere anticlines. The Placerita wells are quite independent of the others and are located on the northward-dipping schists of the San Gabriel Range. The formations involved are the Sespe (eocene), Vaqueros (lower miocene), and Fernando (large pliocene). All of these are productive. In addition the schists of the San Gabriel Range afford some oil.

Bardsdale Field.

The Bardsdale field, as here described, includes South Mountain and Oak Ridge as far east as the vicinity of Chaffee Canyon. As all of the proved oil territory in the field lies north of the crest of the range, the detailed descriptions will deal largely with the northern slopes.

A single oil field has been developed in the South-Mountain-Oak Ridge anticline. It lies opposite Bardsdale, extending along the axis of the fold from Grimes Canyon westward for a mile and a half. Two companies are operating—the Union Oil Co. and the Bardsdale Crude Oil Co. The territory of the former is adjacent to Grimes Canyon; that of the latter is the westward extension of the field. The wells of these companies are sunk in the rusty-yellow conglomeratic sandstone described as the lowermost formation of this district and possibly of eocene age. The wells are located along the highest portion of the anticline, the elevation of any particular bed diminishing in both directions along the axis of the fold. The records of the wells indicate that oil is found in the rusty sandstone and in the underlying red and gray sandy beds at depths of 300 to 815 feet. The total depth of the wells varies from 500 to 1,000 feet. The oil is black and its gravity is reported as ranging from 23° to 32° B., the average being about 30 degrees. In one instance an oil of about 17° B. was encountered. Occasionally water is pumped with the oil, but this is exceptional where a good landing stratum is obtained for the casing. Such a stratum is usually found among the red bands of the beds underlying the rusty sands. These, being generally more argillaceous than the gray bands, afford a more nearly water tight bed. The wells of the Union Oil Co. have been steady producers for a number of years, the decrease reported to the writer being but slight.

Torrey-Eureka-Tapo Fields.

The district discussed in the following paragraph embraces Oak Ridge, east of Chaffee Canyon, and the western portion of the Santa Susana Mountains as far east as the head of Tapo Canyon. Within it are three productive areas—those of Torrey, Eureka, and Tapo Canyons.

The productive territory of the Torrey anticline, forming what is known as the Torrey field, embraces an area of about one square mile, the length being twice the breadth and lying with the strike of the rocks, which gradually bend from N. 65 degrees W., the direction

prevailing on the side of the flexure, to north-west, north north-west, and north as the strata round its end. The axis of the anticline passes close to the northern edge of the field, the wells, with a few exceptions, having been drilled in the strata of gentler dip, 30 degrees to 40 degrees, south of the axis. In all there are between 50 and 60 wells, aligned in seven or eight concentric arcs, in accordance with the curves assumed by the outcropping strata.

The wells of Eureka Canyon are located in its lower reaches, most of them being grouped at the sharp turn half-a-mile above its mouth. The geology of the immediate region is somewhat doubtful, but if the structure is that of a highly compressed compound fold the locus of the wells is not far from its anticlinal axis; moreover, the developed territory is in the vicinity of a prominent curve in the stratification planes, the axis having been pushed somewhat northward between Eureka and Torrey canyons.

Wells have been drilled in the main fork of Tapo Canyon and also in each branch of a westerly tributary. Those at present producing lie along the east fork of this tributary. They are four in number, although from their designation, Nos. 12 to 15 inclusive, it is to be inferred that several others have been in existence in earlier days. Indeed, one or two of these old wells still contain a slight amount of oil. The producing wells are sunk in northward dipping sandstone and shale a mile north of the axis of the Tapo anticline. They yield at present from 5 to 40 barrels of oil per day. The gravity is 20 degrees to 24° B., the 20-degree oil being produced by the well highest up in the canyon and lowest as to the strata penetrated.

Pico Fields.

The Pico district, the western part of what is popularly known as the "Newhall district," comprises the region of the Santa Susana Mountains from Tapo Canyon to Fernando Pass. The Newhall district is divided into the Pico and Elsmere districts for the purpose of this discussion, the geologic condition in the two sub-districts being quite different.

The productive fields of the Santa Susana Mountains, enumerated from west to east, include those of Pico, Dewitt, Towsley, Wiley, Rice and East Canyons, all on the northern slope. With the exception of those in Dewitt Canyon, which are apparently on a secondary crumple, all are ranged along the main Pico anticline, some to the north, others to the south of the axis. The anticline apparently maintains a uniform elevation except at the extremities, where it pitches east and west, respectively. This uniformity of level may account for the fact that the anticline has been found productive for so large a proportion of its length. This is in marked contrast to the development along the Oak Ridge anticline, the axis of which is decidedly undulating and which has been proved productive only at its point of maximum elevation opposite the town of Bardsdale. Doubtless many other factors enter into the explanation of the relative productiveness of the two anticlines, but the conditions above mentioned are to be considered in any attempt to account for it.

Elsmere Field.

The Elsmere field comprises that portion of the Newhall district lying east of Newhall Creek and extending as far east as Los Pinetos Canyon. The productive territory is confined to the north-west end of the San Gabriel range, which terminates at Fernando Pass and Newhall Creek.

The Elsmere oil field is developed in the broad sweep of the strata about the west end of the Elsmere anticline. The companies operating, named in order from south to north, include the Enterprise, Zenith, Eureka, Crude, Pearl, Santa Ana and Pacific Coast. The Pacific Coast wells are confined chiefly to the slopes and bottom of Elsmere Canyon, although a few are ranged along the crest and western face of Elsmere Ridge. The Santa Ana Co. has three wells high up on the north point of this ridge, while the wells of the other companies are ranged along a tributary of Newhall Creek, west of Elsmere Ridge, in proximity to the Los Angeles waggon road. Roughly, the wells are ranged concentrically about the anticline, the Enterprise, Pearl and Zenith lying farthest out and to the west, the wells of Elsmere Ridge in a circle somewhat within these, and those of the Pacific Coast Oil Co. in Elsmere Canyon nearest the heart of the fold. In addition to the above, Nettleton and Kellerman have a group of three wells a little farther north and the New Century and Freeman and Nelson oil companies a few wells in Placerita Canyon, five miles east of Newhall. The well of the California Oil Co., high up on the slopes of the San Gabriel Range, is said to penetrate a few feet of still older beds of the Vaqueros and then to pass into granite.

TO BURN LIQUID FUEL.

The steamship "Hermione," built by Sir W. G. Armstrong, Whitworth and Co., Ltd., and recently fitted out by the Wallsend Slipway and Engineering Co., Ltd., with a complete installation, on the Korting system, for burning liquid fuel, has been submitted to a series of trials at sea. The liquid fuel is injected into the furnaces under pressure, no steam being used for disintegrating the oil. The oil fuel is atomised by means of a centrifugal sprayer, consisting of a nozzle enveloped by a fine mesh strainer, through which the oil is forced by means of a pump. The fuel particles issue from the mouth of the sprayer in the form of a cone, and as a wide round flame is the result, no intense local flames are formed. Three small oil pumps are fitted, one for delivering the oil fuel from the main storage tanks to the settling tanks, another for delivering the liquid fuel from the settling tanks to the burners, whilst the third pump is retained as a stand-by in case of a break-down of either of the other two pumps. The exhaust steam from these pumps is led back to the condenser; and, as no steam is used at the burners, there is consequently no loss of feed water and no additional evaporative plant is necessary on account of oil burning. The liquid fuel, on the way from the oil pumps to the burners, passes through a special oil fuel heater, in which the oil is raised to a prescribed temperature, and then passes through a duplex filter before reaching the burners. The burners are of simple construction, and so designed that any individual part is easily renewable. The installation on the "Hermione" is fitted to work under natural draught conditions, but the Korting system of oil burning is capable of being used with satisfactory results in conjunction with either forced or induced draught.

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING SEPTEMBER.

THE SHIPMENTS INTO VARIOUS PORTS.

The imports of petroleum and the various allied products into the different ports of the United Kingdom during September are published in the following table. In all, the month's shipments amounted to 24,521,330

gallons, as against a total of 23,485,660 gallons for August. The imports of benzine during the month were very small, no bulk cargoes having been received. The table is as under :—

			Lubricating.	Illuminating.	Residuals.	Benzine.	Other Products	Fuel.	Gas.
Aberdeen	...	...	140	—	—	—	—	—	—
Barrow	...	...	—	—	—	960,960	—	545,100	—
Belfast	...	...	1,530	—	—	—	—	—	—
Bristol	...	...	165,300	4,200	—	—	—	—	—
Cardiff	...	...	8,800	—	—	—	—	—	—
Dundee	...	...	—	—	—	—	400	—	—
Glasgow	...	...	389,200	—	—	—	25,990	—	—
Goole	...	...	1,440	—	—	—	—	—	—
Grangemouth	...	...	6,660	23,960	—	—	400	—	—
Grimsby	...	...	2,180	—	—	—	—	—	—
Hull	...	...	231,110	1,321,720	—	960	9,640	—	263,840
Leith	...	...	54,680	40,980	—	—	—	—	—
Liverpool	...	...	1,599,540	708,380	130,720	40,000	13,460	—	809,900
London	...	...	640,060	6,910,510	—	428,590	270	—	3,679,930
Manchester	...	...	1,181,810	705,150	—	—	9,230	—	2,084,330
Middlesboro'	...	...	3,940	—	—	—	—	—	—
Newcastle	...	...	218,030	—	—	—	—	—	—
Plymouth	...	...	—	876,430	274,950	—	142,050	—	—
Southampton	...	...	2,040	—	—	—	—	—	—
Swansea	...	...	2,820	—	—	—	—	—	—
Totals	...	...	4,509,280	10,591,330	405,670	1,430,510	201,440	545,100	6,838,000

AMERICAN NOTES

Gulf Coast Production.—The production of the Gulf Coast region during August was somewhat in excess of that of any of the other months of this year, yet is still about 100,000 barrels short of the estimated consumption.

Mr. Henry H. Rogers.—We regret that the condition of Mr. Henry H. Rogers, one of the chiefs of the Standard Oil Co., still continues to give rise to much anxiety. Mr. Rogers, we may mention, has been far from well for a number of months.

Operations in Wetzel County.—Recent operations in Wetzel county in the vicinity of the gusher are growing daily more interesting. At the present time 20 new wells are getting down to the oil sand. The gusher is now making about 600 barrels daily.

A Mammoth Pumping Station.—The Ohio Oil Co. is building a mammoth pumping station two miles from Morral, Ohio. When completed this will cost almost \$100,000. The plant and huge storage tanks will occupy no less than 57 acres.

The Unique Californian Pipe Line.—The rifled pipe line, of which we spoke in a recent issue of the REVIEW, and which is to run from Delano to San Francisco, is being rapidly laid, and the contractors estimate that within three months the thick crude oil will be passing through the pipe by means of water under pressure.

A Record Year.—America's petroleum production for the past eight months go to shew that a record may be established for the present year, and the twelve months' production increased to the extent of 25,000,000 barrels. The majority of the production is coming from the Mid-Continent fields, where the Glenn pool is furnishing daily surprises in production.

The Huasna Field.—Considerable interest has lately been taken in the Huasna field, which lies to the north-east of the Santa Maria valley in California. The surface indications are said to be excellent—in fact, the oil rock croppings, sands and asphalts are on a prodigious scale. The first well in the territory is now down about 2,000 feet and in the oil formation.

Mid-Continent Statistics.—The runs by the Prairie Oil and Gas Co. for the first three weeks in September in the Mid-Continent oil fields shew that the daily average has been 108,000 barrels. These runs are considerably in advance of those for the preceding month. The shipments from the field have also increased, yet much oil is still going into stock.

The Ohio Oil Company to the Rescue.—A communication from Martinsville, Ill., states that the Ohio Oil Co. has commenced laying the pipe for the new line to the refinery of the Standard Oil Co. at Alton on the Mississippi River, about 18 miles north of St. Louis. This line when completed will furnish another outlet for the great production of the field.

The Mid-Continent Fields.—The rapid growth of the Mid-Continent fields is strikingly shewn by the *Oil Investors' Journal*, which mentions that though the total production for 1906 was about 23,000,000 barrels, as against 12,000,000 barrels for the preceding year, the oil runs of the Prairie Oil and Gas Co. alone for the eight months of this year have already reached the total figures of production for 1906.

Water Trouble in Coalinga.—It is stated that the water trouble in Coalinga has been solved. The head of the Geological Survey in Coalinga has all along claimed that the formation which is exposed does not carry the water sand that is claimed to be encountered by some. Those who have given the subject a close study assert that those claiming to have encountered water in the sand are not in the sand at all. Therefore, in many cases the pipe is being carried down into the lower oil sand, even if water is encountered previously.

A Reasonable Argument.—The *Oil, Paint and Drug Reporter's* correspondent at Toronto states that owing to the depth of the wells in the Tilbury field, the only system of drilling that is successful is the American cable tool system. These outfits cannot be obtained in Canada, and so the producer has to pay a heavy import duty upon the tools which he must have. The writer points out that Canadians would receive more encouragement to drill if only the import duty upon drilling tools were removed, and if a duty were imposed upon oil from the States, which oil now pours into Canada from the American fields.

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR AUGUST.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during August were as under:—

	1906. Quantities. Gallons.	1907. Quantities. Gallons.
CRUDE—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	9,885	—
New York	10,863,015	—
Philadelphia	4,963,841	9,264,208
Galveston and Sabine	—	1,664,266
Total	15,836,741	10,928,474
Total value for the month, 1906	—	\$894,218
" " " 1907	—	\$636,406
NAPHTHAS—		
Baltimore	—	—
Boston and Charlestown	—	5,457
Delaware	—	—
New York	213,859	596,594
Philadelphia	652,143	157,200
Galveston	—	—
Total	866,002	759,251
Total value for the month, 1906	—	\$102,699
" " " 1907	—	\$126,677
ILLUMINATING—		
Baltimore	—	—
Boston and Charlestown	4,450	6,591
Delaware	—	—
New York	45,908,961	55,039,635
Philadelphia	34,551,094	29,896,029
Galveston	—	2,290,163
Total	80,464,505	87,232,418
Total value for the month, 1906	—	\$5,032,541
" " " 1907	—	\$5,967,550
LUBRICATING—		
Baltimore	175,665	420,324
Boston and Charlestown	17,423	25,537
Delaware	—	—
New York	6,405,518	11,167,410
Philadelphia	2,621,418	4,979,695
Galveston	25,952	—
Total	9,305,976	16,592,966
Total value for the month, 1906	—	\$1,217,345
" " " 1907	—	\$2,036,810
RESIDUUM—		
Baltimore	—	—
Boston and Charlestown	12,500	—
Delaware	—	—
New York	4,000	12,500
Philadelphia	4,552,964	2,369,868
Galveston	12,272	6,285,277
Total	4,581,736	8,667,645
Total value for the month, 1906	—	\$129,447
" " " 1907	—	\$283,524
TOTAL MINERAL OILS—		
Baltimore	175,665	420,324
Boston and Charlestown	34,373	37,585
Delaware	—	—
New York	52,602,223	66,816,139
Philadelphia	53,240,634	46,667,000
Galveston	5,002,065	10,239,706
Total	111,054,960	124,180,754
Total value for the month, 1906	—	\$7,376,250
" " " 1907	—	\$9,050,967

YOKOHAMA PETROLEUM IMPORTS DURING AUGUST.

The imports of petroleum and its products into Yokohama during August amounted to 923,455 gallons, being valued at 184,693 yen, as against an import of 2,154,674 gallons for the corresponding month last year, valued at 449,630 yen. The total quantities of petroleum products imported into Yokohama for the eight months of this year are 7,817,149 gallons.

The American Oil Market.

New York, Week ended Sept. 28th.

The fourth sand gusher of Wetzel county, West Virginia, continues to attract principal interest in the lower south-west fields, and according to a late report it was maintaining a flow of about 700 barrels a day, a previous slump in the production being attributed to a mishap in the machinery. Other tests are due in the locality and the keenest interest is manifested in the outcome. There is nothing approaching this well in the districts of the Pennsylvania classification, but West Virginia remains well in the front of productivity with several wells in the 100-barrel class. Lower sand operations in Ritchie county resulted in a strike that was reported promising for 75 barrels a day, but late developments otherwise have offered comparatively little encouragement. The most encouraging news from Pennsylvania is the report of a well in Allegheny county which responded to deeper drilling by an increase in production to 12 barrels per hour. The Lima fields of north-western Ohio and Indiana present little of particular interest, and new operations are practically at a standstill, except in the western section of Indiana. The greatest activity throughout the fields, says the *Oil, Paint and Drug Reporter*, consists of pulling out of the old wells that have ceased to respond and shipping the material to the newer Illinois field, where it is available for shallow sand operations.

Our correspondent in the Mid-Continent fields writes of the promising prospects for shallow sand operations in Kansas, the possibilities of the territory seeming to be without limit. Operators are keenly interested in the probable connection of the Delaware and Coody's pools by a continuous string of wells, although the formation of both districts has shewn considerable irregularity, upsetting the calculation of the most experienced men in the field. After nearly three years steady drilling, the Delaware pool has proved almost the same enigma as when first opened up. Advices from California indicate a probable shortage in the State's production for the year, what is declared to be a most liberal estimate placing the total output at not more than 40,000,000 barrels, while the present consumption approximates a daily average equal to this amount in a year, with prospects of steady increase. Development in the Kern River field of California seems to be more keenly prosecuted than ever before in the history of the district, with shipments for August considerably in excess of the average production. More interest is reported in the Huasna field of California, the surface indications being regarded as most encouraging. Advices from Kentucky note a trend of development toward south-eastern territory, which promises to become one of the active sections of the State. In the old territory the new production continues light. The Jennings field of Louisiana is the scene of fresh interest, two producers, each credited with about 1,000 barrels per day, being reported as a result of developments within the last week.

REFINED AND PRODUCTS.—The local market for refined has not shewn the same degree of activity during the week under review as noted in our previous report, the demand both for home and foreign account being of diminished proportions. Our record of clearances for the week from this port reaches a total of 8,249,660 gallons, of which 5,232,550 gallons were shipped in bulk. The aggregate for the previous week was 11,148,500 gallons. The export movement from Philadelphia for the current week involved 7,232,860 gallons, against 8,036,830 gallons for the previous week. Charters reported from New York were 160,000 cases for prompt shipment to Saigon, Haiphong and Tourane, and 50,000 cases for October shipment to Las Palmas or Teneriffe. Values have undergone no quotable change, the general tendency of the market being one of maintained firmness, in sympathy with the crude situation.

Trading in the products has been of average dimen-

sions, and the market has developed nothing of particular interest. Prices shew no variation from the basis lately in effect, and are apparently steady at quotations. Export requirements of naphtha continue fairly active, the week's engagements aggregating 112,580 gallons.

CLOSING QUOTATIONS

CRUDE.		Week ended	
		Sept. 21. 1907.	Sept. 28. 1907.
Pennsylvania crude in bbls.		\$8.20	\$8.20
Pennsylvania crude in bulk		4.75	4.75
Residuum, bbls. for export		6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Sept. 28. 1906.	Sept. 28. 1907.
Pennsylvania		1.64	1.78
Tiona		1.74	1.78
North Lima		0.98	0.94
South Lima		0.93	0.89
Indiana		0.93	0.89
CANADIAN OIL:			
Petrolia		1.37	1.34

REFINED—FOR EXPORT.

		Week ended	
		Sept. 23.	
		S.W.	W.W.
Barrels, cargo	per gal.	\$8.45	@10.45
Philadelphia		8.40	@10.40
Bulk, New York		5.00	@7.00
Bulk, Philadelphia		4.95	@6.95
Cases, New York		10.90	@13.90
Cases, Philadelphia		10.85	@13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Sept. 21. 1907.	Sept. 28. 1907.
3,000 to 10,000		10.80	10.80
1,000 to 3,000		10.85	10.85

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Sept. 21.	Sept. 28.
120 fire test, S.W.	in barrels	12	12
130 fire test, S.W.		12½	12½
150 fire test, W.W.		13½	13½
In bulk from tanks		10	10
300 fire test		13½@14	13½@14

NAPHTHA AND GASOLINE.

		Week ended	
		Sept. 21.	Sept. 28.
Naphtha, crude, car. lots, 68 @ 72 deg.		16.00	16.00
Gasolene, 86 deg.		24.00	24.00

PENNSYLVANIAN OIL RUNS from Sept. 18th to Sept. 22nd were:—Sept 18th, 92,528; Sept. 19th, 151,584; Sept. 20th and 21st, 309,785; Sept. 22nd, 30,382. For the month of August, 2,815,316.

THE DELIVERIES OF PENNSYLVANIA OIL from Sept. 18th to Sept. 23rd were:—Sept. 18th, 220,109; Sept. 19th, 168,472; Sept. 20th, 195,487; Sept. 21st and 22nd, 327,381; and Sept. 23rd, 159,672. For the month of August, 5,789,092.

CLEARANCES FOR THE WEEK.

During the week ended Sept. 27th, and since Jan. 1 the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.		Year.		1906.	
Refined		8,249,660	349,771,445	341,248,024			
Crude		—	1,436,925	232,900			
Naphtha		112,580	7,005,170	13,597,224			
Residuum		—	416,827	3,619,600			

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

		Gallons.	
From New York, week ended Sept. 27th		10,999,547	
Total from New York, from Jan. 1st, 1907		517,886,515	
Same period last year		455,913,600	
Increase		51,972,915	
From United States, week ended Sept. 27th		17,683,521	
Total from United States, since Jan. 1st, 1907		930,094,205	
Same period last year		898,101,881	
Increase		31,992,324	

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The "Review" Shipping List.

OCTOBER 11, 1907.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Smyrna	Bilbao	P. Sagres, Oct. 5	ETELKA	Batoum	London	At Algiers, Oct. 5
ALICE ISABELLE ..	Philadelphia	Sables d'Olonne	P. Del. Break., Sept. 25	EUPLECTELA	Batoum	Port Said ..	Arr. Oct. 3
ALEMBIC	Sydney (C.B.)	New York ..	Arr. Sept. 6	EXCELSIOR	Hamburg ..	New York ..	P. Dunnet Head, Oct. 8
AMERICAN	New York ..	Antwerp	Arr. Sept. 28	EZIO	—	—	Coasting Peru
APPALACHEE	Calcutta	Kustendje ..	P. Dardenelles, Oct. 1	FRANCE MARIE ..	Marseilles ..	Philadelphia	L. Sept. 19
APSCHERON	Trieste	Batoum	Arr. Oct. 7	GEESTEMUNDE ..	Philadelphia	Christiana ..	P. Dunnet Head, Oct. 4
ARAL	Hamburg ..	Philadelphia	Arr. Oct. 3	GENESSE	Manchester	New Orleans	At St. Michaels, Sept. 28
ARAS	Newport	Kustendje ..	P. Gibraltar, Sept. 27	GEORGIAN	Philadelphia	Rouen	Arr. Oct. 7
ARGYLL	—	—	Coasting U.S. (Pacific)	GOLDMOUTH	Rotterdam ..	Cardiff	Arr. Oct. 7
ASHTABULA	Shanghai ..	San Francisco	L. Sept. 22	GUTHEIL	New York ..	Stettin	Arr. Oct. 6
ASTRAKHAN	Philadelphia	Hamburg ..	Arr. Oct. 8	HAINAUT	Ibrail	Smyrna	L. Constant'ple, Oct. 2
ATLAS	—	—	Coasting U.S. (Pacific)	HARRY	Middlesbro'	London	Arr. Oct. 7
AUGUSTA	Liverpool ..	Havana	P. Fastnet, Sept. 18	WADSWORTH	—	—	—
AUGUST KORFF ..	Philadelphia	Manchester ..	L. Oct. 4	HELIOS	Philadelphia	Nordenhamn	L. Oct. 1
AUREOLE	Sunderland ..	Philadelphia	L. Oct. 5	HERMIONE	Tyne	Antwerp	Arr. Oct. 7
AZOV	—	—	Trading on W.C. of South Amca.	(Now "Soyo Maru")	—	—	—
BAKU STANDARD	Pauillac	Kustendje ..	L. Algiers, Oct. 7	HOTHAM	Calais	Philadelphia	L. Swansea, Oct. 4
BALAKANI	Philadelphia	Antwerp	Arr. Oct. 7	NEWTON	& Swansea	—	—
BATOUM	Singapore ..	Aomori	L. Kawasaki Spit, Oct. 10	HOUSATONIC	Kustendje ..	Bombay	P. Aden, Sept. 27
BAYONNE	New York ..	Leghorn ..	Arr. Oct. 1	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BEACON LIGHT ..	Philadelphia	Hamburg ..	P. Del. Break., Sept. 29	JOANNIS COUFZIS	Pearth	Batoum	At Piræus, Oct. 4
BEME	Kurrachee ..	Rangoon	L. Mormugao, Sept. 19	J.B.AUG.KESSLER	Singapore ..	Channel	L. Port Said, Sept. 28
BLOOMFIELD	Tyne	Batoum	P. Gibraltar, Oct. 5	JAMES BRAND	London	Kustendje ..	P. Gibraltar, Oct. 5
BORJOM	Alexandria ..	Batoum	At Constant'ple, Sept. 14	JULES HENRI	Marseilles ..	Philadelphia	P. Tarifa, Sept. 6
BRILLIANT	New York ..	Swinemuude	L. Oct. 3	KURA	Tyne	Kustendje ..	P. Peniche, Oct. 2
BROADMAYNE	Cardiff	Philadelphia	P. Fastnet, Sept. 26	LA CAMPINE	Tyne	Philadelphia	Arr. Sept. 30
BULLMOUTH	Shanghai ..	Balekpappan	L. Sept. 25	LA FLANDRE	Antwerp	Philadelphia	P. Scilly, Oct. 2
BULYSES	Singapore ..	New York ..	L. Algiers, Oct. 5	LA HESBAYE	Antwerp	Philadelphia	Arr. Oct. 8
BURGERMEISTER	Stettin	Philadelphia	L. Tyne, Sept. 24	LA MADELEINE ..	Algiers	Brest	Arr. June 16
PETERSEN	—	—	—	LA VIGUESA	Philadelphia	Corunna	P. Del. Break., Sept. 29
CALCUTTA	Shanghai ..	San Francisco	L. Aug. 26	LACKAWANNA	Plymouth ..	Philadelphia	Arr. Oct. 9
CAPTAIN A. F.	Newport Nws	Port Arthur	P. Cape Henry, Sept. 17	LANSING	—	—	At San Francisco, Aug. 28
LUCAS	—	(Texas)	—	LE COQ	Havre	Philadelphia	P. Lizard, Sept. 30
CARDIUM	Kustendje ..	Bombay	At Kurrachee, Sept. 28	LOUTSCH	Batoum	Odessa	L. Aug. 14
CATANIA	San Francisco	Port Harford	L. prev. Sept. 13	LUCERNA	Tyne	Philadelphia	P. Dunnet Head, Oct. 2
CAUCASIAN	Antwerp	Philadelphia	Arr. Oct. 7	LUCILINE	Dunkirk	Cardiff	Arr. Oct. 8
CHARLOIS	New York ..	Rotterdam ..	Arr. Oct. 8	LUMEN	Philadelphia	Cette	P. Del. Break., Sept. 25
CHESAPEAKE	Philadelphia	Calcutta	P. Perim, Oct. 1	LUX	Philadelphia	Alicante	P. Del. Break., Sept. 29
CHESTER	Antwerp	Philadelphia	Off the Wight, Sept. 25	MANHATTAN	Batoum	Rotterdam ..	L. Malta, Oct. 1
CIRCASIAN	Talara	Callao	L. Salaverry, Aug. 6	MANNHEIM	Flushing	Philadelphia	L. Tyne, Sept. 30
PRINCE	—	—	—	MARGARETHA ..	Rio Grande	Buenos Ayres	Arr. Sept. 10
CLAM	Madras	Balekpappan	At Singapore, Sept. 8	MAVERICK	Redondo	San Francisco	Arr. Sept. 13
COL. E. L. DRAKE	Seattle	Port Harford	Arr. Sept. 19	METEOR	Hamburg ..	Batoum	P. Gibraltar, Oct. 7
COWRIE	Bordeaux ..	Cardiff	Arr. Oct. 7	MEXICAN PRINCE	Hamburg ..	Rouen	Arr. Oct. 7-8
CUYAHOGA	Manchester	New York ..	Arr. Oct. 7	MIRA	Manchester	Port Talbot	L. Oct. 9
CYMBELINE	Newport	Philadelphia	P. O. Hd. Kinsale Oct. 3	MUREX	Palembang ..	Batavia	L. Aug. 20
CZAR NICOLAI II.	Batoum	Hamburg ..	P. Peniche, Oct. 8	NARRAGANSETT ..	New York ..	London	L. Sept. 30
DAGHESTAN	Batoum	Antwerp ..	P. Constant'ple, Oct. 5	NERITE	—	—	Tr. in China Seas
DAKOTAH	San Francisco	China	L. Sept. 7	NEW YORK	New York ..	Southampton	L. Oct. 5
DELAWARE	Philadelphia	Barrow & Manchester	Off Holyhead, Oct. 5	OCEAN	New York ..	Antwerp	Arr. Oct. 8
DEUTSCHLAND ..	Amsterdam ..	New York ..	Arr. Oct. 2	OILFIELD	Tyne	Philadelphia	P. Dunnet Head, Sept. 30
DIAMANT	Tyne	Philadelphia	P. Dunnet Head, Oct. 6	ORANJE PRINCE ..	Tyne	Havana	L. Sept. 26
EDWARD	Hamburg ..	Christiana ..	Arr. Oct. 6	ORIFLAMME	Philadelphia	Cette	P. Del. Break, Oct. 5
DAWSON	—	—	—	OSCEOLA	Boston	Port Limon ..	Arr. Oct. 6
ELAX	Cardiff	Philadelphia	L. Oct. 1	OTTAWA	Tyne	Philadelphia	P. Dunnet Head, Oct. 3
ELISE MARIE	New York ..	Amsterdam ..	L. Oct. 6	OURAL	Batoum	Antwerp	P. Constant'ple, Oct. 6
ENERGIE	Tyne	New York ..	P. Dunnet Head, Oct. 3				
ERIVAN	Batoum	Hamburg ..	L. Oct. 8				

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PALEMBANG	Canton	Hong Kong..	Arr. Sept. 1	SINGU	—	—	Tr. in East Indies
PAULA	New York ..	Konigsberg	L. Oct. 5	SNOWFLAKE.....	Philadelphia	London	L. Oct. 6
PECTAN	Port Arthur	London	Arr. Oct. 6	SPONDILUS	Rotterdam ..	Singapore ..	P. Perim,
	(Texas)						Oct. 3
PENNOIL.....	Tyne	Philadelphia	P. Dunnet Head, Oct. 6	STANDARD	Philadelphia	Gothenburg	P. Scaw,
							Oct. 4
PERLAK	Calcutta	Madras	Arr. Aug. 20	STROMBUS	Cardiff	Singapore ..	At Port Said,
PHOEBUS	Hamburg ..	New York ..	L. Tyne, Sept. 27				Oct. 4-5
				SURAM.....	London and Port Talbot	Philadelphia	L. Port Talbot,
PINNA	San Francisco	Japan	L. Gaviota, Sept. 20	SUWANEE	London	Manchester	Arr. Oct. 6
POTOMAC	London	Philadelphia	P. Prawle Pt., Oct. 3	SVIET	Alexandria ..	Batoum	L. Zoungouldak,
							Sept. 27
PROMETHEUS....	Rotterdam ..	New York ..	Arr. Oct. 7	TELENA	Rangoon....	Europe	L. Colombo,
PRUDENTIA	—	Singapore ..	Arr. Aug. 26				Oct. 1
QUEVILLY.....	Philadelphia	Rouen.....	L. Oct. 6	TEREK.....	Philadelphia	Hamburg ..	L. Oct. 1
RION.....	Port Talbot	Philadelphia	L. Sept. 24	TIFLIS	Hamburg	Batoum	P. Sagres,
ROCK LIGHT	Rotterdam..	W. Africa ..	Off Ushant, Oct. 8		& Tyne		Oct. 7
				TIOGA	Emden.....	Galveston ..	Arr. Oct. 1
ROMANY.....	Singapore ..	Channel	At Suez, Oct. 9-10	TONAWANDA	San Francisco	Hankow	L. Sept. 12
ROSSIJA	Hartlepool ..	Archangel ..	L. Sept. 24	TROCAS	Balekpappan	Hankow	L. Oct. 1
ROTTERDAM	Santos & Port Natal	Calcutta	Arr. Sept. 25	TURBO.....	Hamburg ..	Port Arthur	P. Dungenes,
						(Texas)	Sept. 20
RUSSIAN PRINCE	Philadelphia	Tampico	P. Del. Break., Sept. 27	TUSCARORA	London	New York ..	Arr. Oct. 2
SALAHADJI	—	—	Tr. Sts. Settlements and Java Seas	TWINGONE	Rangoon ..	Madras	L. Sept. 25
				VEDRA.....	Singapore ..	Japan	L. Oct. 7
SAN CRISTOBAL..	Tyne	Philadelphia	Arr. Oct. 5	VILLE DE DIEPPE	Passage West	Philadelphia	Sp. Sept. 24, 50 N. 15 W.
SAN IGNACIO	Philadelphia	Gijon	P. Del. Break, Sept. 16	VOLUTE	Balekpappan	Pulo Samboe	Arr. Oct. 2
DE LOYOLA				WASHINGTON....	Kustendje ..	Antwerp	L. Constant'pie,
SAXOLEINE	Blaye	Philadelphia	Arr. Oct. 3				Oct. 3
SEMINOLE.....	Calcutta	San Francisco	L. Muroran, Sept. 23	WILLKOMMEN....	Hamburg ..	Philadelphia	L. Tyne,
							Sept. 28
				WINNEBAGO	Itosaki	San Francisco	Arr. Sept. 28

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

October 11th, 1907.

There are no alterations in the price of Petroleum, quotations remaining as follows:— Russian and Roumanian, 6½d.; American, 6¾d.; Water White, 7¾d.

LUBRICATING OILS

are unaltered as follows:—

American pale, £7 7s. 6d. to £11.

American dark cylinder, from £8 10s.

American filtered cylinder, from £11 2s. 6d.

Shellene, £5. No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine has been fluctuating daily, the latest quotations being slightly higher than when last we reported. For Spot it is now quoted 38s. 6d.; November-December, 39s.; and for the first four months of next year, 40s. to 40s. 3d.

LIVERPOOL OIL MARKET.

October 10th.

Refined oils are quiet, and sellers quote 6¾d. for Russian, Galician or Roumanian; and 7½d. to 8½d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0½d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, October 10th.

Refined, in cases, is steady at 10'90; Standard White, 8'45; Credit balances, 1'78c.

PHILADELPHIA, October 10th.

Standard White is still quoted at 8'40.

RUSSIA.

BAKU, October 5th.

The Baku oil market is firm. Light crude oil, spot, 30-30½ copecs per pood; heavy Balakhany crude, spot, 31 copecs; residuals, in ships, 30-30½ copecs; kerosene, in waggons, September-March, 40 copecs.

BELGIUM.

ANTWERP, October 5th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, October 4th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34'25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, October 5th.

The kerosene market is firm. The price of American Standard White is 7'50 marks per 50 kilos.

ROUMANIA.

October 3rd.

Crude oil from different fields, including	Franks.
pipe line charges, per 100 kgs. ...	4'05-4'10
Refined oil, exclusive of taxes ...	8'00- —
Motor benzine, including taxes ...	23'00-24'00
Benzine, doubly refined ...	25'00-26'00
Residuals in tank waggons, at refinery ...	3'60-3'80
Paraffin ...	120'00-125'00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	6'50- —
Benzine, sp. gr. 0'710-0'715 ...	21'00-22'00
" sp. gr. 0'715-0'720 ...	19'00-20'00
" sp. gr. 0'730-0'740 ...	14'00-15'00
" sp. gr. 0'745-0'755 ...	10'00-11'00

INDIA.

BOMBAY, September 20th.

Market strong.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. ..	Rs. 6 4 2
" Chester, 125 deg. ..	4 12 2
" Monkey Brand, 125 deg. ..	4 4 2
" Bulk, 125 deg. (in local made tins)..	3 12 6
" " 125 deg. (8 Imperial gallons)	3 2 6
" "White Camelia" brand, 125 deg. ..	No stock.

The Asiatic Petroleum Company, Limited

Current rates are:—

Burmah oil, in tins, per pair ..	3 8 0
Sumatra "Rising Sun," bulk, per unit ..	3 3 0
" " tins, per pair ..	3 13 0
Silverlight cases, per case ..	5 4 0
Sumatra, "Anchor" per case ..	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for
this Journal by . . .
the Custom House. .

FOR THE WEEK ENDED 30TH SEPTEMBER, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
Sept.	LONDON—			
24	London and India Docks Co.	Lub.Gr.	240	New York
24	Fielder, Hickman and Co...	Lub.	26,240	"
24	Anglo-American Oil Co.	"	29,200	Philadel.
25	"	"	38,600	New York
25	Scott's Wharf	"	3,400	"
26	Houlder Bros. and Co.	"	250	"
26	Mercantile Lighterage Co...	"	6,250	"
26	Alex. Duckham and Co.	"	3,000	Philadel.
26	Capt. Benson	"	120	Hamburg
28	T. H. Lee	Lub.Gr.	490	"
28	"	Lub.	400	"
28	London and India Dock Co.	"	3,500	"
28	Ragosine and Co.	"	6,020	St.Petersbrg.
28	G. W. Sheldon and Co.	L.Comp.	1,460	New York
28	Langley, Smith and Co.	Lub.	3,600	"
28	A. Brown and Co.	"	4,800	Philadel.
30	Mordaunt Bros.	"	15,200	New York
30	Schlieman's Oil Co.	"	5,200	St.Petersbrg.
30	Page, Son and East..	"	890	Antwerp
30	Leach and Co.	"	210	Ghent
	LIVERPOOL—			
24	George B. Taylor	"	560	New York
25	Crew, Levick, and Co.	"	7,870	Philadel.
25	Meade-King, Robinson & Co.	"	6,000	Baltimore
25	"	"	400	Hamburg
26	"	"	3,920	Philadel.
26	Burnaby and Chantrell	L.Comp.	1,680	New York
27	Vacuum Oil Co.	Lub.	7,200	"
	BRISTOL—			
24	H. R. James and Sons	"	4,000	"
26	Pickford's	"	320	Hamburg
	GRIMSBY—			
26	J. Sutcliffe and Son..	"	1,020	Antwerp
26	"	"	120	Hamburg
	HULL—			
26	Wilsons and N.E. Railway Shipping Co.	"	1,000	Antwerp
26	Homelight Oil Co. (Edward Dawson)	Lamp	625,600	Batoum
	MANCHESTER—			
24	Crew, Levick and Co.	Lub.	17,240	Philadel.
24	"	M.Colza	9,230	"
24	Geo. B. Taylor	Lub.	154,640	"
24	Meade-King, Robinson & Co.	"	19,920	"
24	"	"	4,000	New York
26	A. H. Dawson and Co.	"	800	"
26	G. B. Taylor	"	840	Hamburg
	MIDDLESBRO'—			
24	J. J. Sutherland	"	1,540	Antwerp

DATE.	PORT AND IMPORTER.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Sept.	NEWCASTLE—			
24	Tyne-Tees Steamship Co. ..	"	4,020	Hamburg
24	"	"	5,240	Antwerp
24	P. H. Matthiessen and Co..	"	200	Bergen
26	J. Arnott and Sons ..	"	7,650	New York
26	Furness, Withy and Co. ..	"	10,000	"
27	Anglo-American Oil Co. ..	"	145,000	"
	SWANSEA—			
24	Richards, Turpin, and Co...	"	2,400	"
	DUNDEE—			
26	D. Alexander and Sons	Crude	400	Hamburg
	GLASGOW—			
26	Clyde Shipping Co...	Lub. Gr.	130	Antwerp
26	Anchor Line	M.Colza	16,000	New York
26	"	Lub.	67,560	"
27	J. and A. Allan	"	19,840	Philadel.
	GRANGEMOUTH—			
24	W. Graham-Yooll and Co ..	Lamp	2,000	Hamburg
26	"	"	3,120	"
	LEITH—			
26	W. Graham-Yooll and Co...	"	8,720	"
26	J. Cormack and Co.	Lub.	1,000	Riga
26	G. Gibson and Co. ..	"	610	Antwerp
	BELFAST—			
26	J. C. Pinkerton and Co.	"	1,350	Hamburg
	Total for Week	"	1,312,210	

Deduct to Correct:—

	LIVERPOOL—			
10/9	Bramwell, Fern and Co.	Lub.	98,000	Batoum
	(Erivan)			
10/9	Meade-King, Robinson & Co.	"	98,000	"

FOR THE WEEK ENDED 7TH OCTOBER, 1907—

Oct.	LONDON—			
1	Fielder, Hickman and Co...	Lub.	9,880	New York
1	Anglo-American Oil Co. ..	"	59,800	"
3	Schlieman's Oil Co.	"	3,650	Philadel.
3	Lubricating & Fuel Oils, Ld.	"	20,500	"
3	Anglo-American Oil Co. ..	"	43,040	"
3	(Weehawken) Naphtha	"	1,036,120	New York
3	Page, Son and East ..	Lub.Gr.	240	Antwerp
4	J. Harrison	Lub.	130	"
4	T. H. Lee	"	440	Hamburg
4	Shell Transport and Trad. Co.	Fuel	1,020,000	Pt. Arthur
	(Pectan)			

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BIRMINGHAM.

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SOLE IMPORTERS:—

Anglo-American Oil Co., Ltd.,

22, Billiter Street,

Telephone Nos.:—5733-7 Avenue.

. . LONDON, E.C.

DATE	PORT AND IMPORTERS	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Oct.				
5	Schlieman's Oil Co.	.. Lub.	6,500	St. Petersburg.
5	London and India Docks Co.	.. "	2,300	Hamburg
7	T. H. Lee ..	.. "	590	"
7	W. H. J. Alexander..	.. "	10,660	"
7	Wilkins, Campbell and Co.	.. "	320	Antwerp
7	Page, Son and East	.. "	360	"
LIVERPOOL—				
1	W. Gibson and Sons	.. Lamp	2,050	Boston
1	Pickford's, Ltd.	.. L. Paste	750	Hamburg
1	"	.. Lub.	170	Rotterdam
1	Penwarden and Jackson	.. "	240	Antwerp
1	Vacuum Oil Co.	.. Lub. Gr.	160	Copenhagen
1	George B. Taylor	.. Lub.	440	New York
2	Valvoline Oil Co.	.. "	3,490	New York
3	Bowring Petroleum Co.	.. "	470	Philadel.
3	Meade-King, Robinson & Co.	.. "	35,600	"
3	Uneco Asbestos Light Co.	.. "	2,450	"
3	American Line	.. "	3,600	"
3	Crew, Levick and Co.	.. "	14,910	"
3	Worthington and Boler	.. "	2,400	"
3	Geo. B. Taylor	.. "	72,560	New York
3	Vacuum Oil Co.	.. "	11,600	"
3	Evan, Leigh and Sons	.. "	2,000	Boston
3	A. Hopps and Sons..	.. "	6,390	Baltimore
5	Meade-King, Robinson & Co.	.. "	6,000	"
5	Geo. B. Taylor	.. "	2,400	New York
5	Bramwell, Fern and Co.	.. "	2,400	Philadel.
7	S. R. B. Melling and Co.	.. "	400	New York
7	Thompson, McKay and Co.	.. "	1,400	Hamburg
7	C. W. Field and Co.	.. "	280	Antwerp
BARROW—				
7	Anglo-American Oil Co.	Naphtha	397,220	Philadel.
	(Delaware)			
7	"	Lamp	883,510	"
BRISTOL—				
3	Anglo-Bosphorus Oil Co.	.. Lub.	6,000	Hamburg
3	Pickfords	.. "	2,100	"
3	H. R. James and Sons	.. M. Colza	1,000	New York
3	"	.. Lub.	8,600	"
5	W. Smith and Co.	.. "	50,760	"
5	"	.. Lamp	800	"
GOOLE—				
7	Lanc. and York. Ry. Co.	.. Lub.	600	Antwerp
GRIMSBY—				
1	J. Sutcliffe and Son..	.. "	160	"
3	"	.. "	150	Hamburg
3	"	.. "	2,160	Antwerp
HULL—				
3	Wilson's and N.E. Railway Shipping Co.	.. "	520	"
3	W. Gilyott and Co.	.. "	104,360	New York
MANCHESTER—				
3	J. T. Fletcher and Co.	.. "	270	Antwerp
4	Bramwell, Fern and Co.	.. "	3,090	New York
4	Meade-King, Robinson & Co.	.. "	4,000	"
4	"	.. "	67,960	Philadel.
4	"	.. M. Colza	7,600	"
7	Crew, Levick and Co.	.. Lub.	9,280	"
7	G. B. Taylor	.. "	136,080	"
7	"	.. "	191,560	New York
7	Liverpool Storage Co.	.. "	10,200	"

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Oct.				
MIDDLESBRO'—				
1	Hanson Brown and Co.	.. Naph.	14,000	Rotterdam
NEWCASTLE—				
3	Tyne-Tees S.S. Co.	.. Lub.	2,400	Antwerp
5	P. H. Matthiessen and Co.	.. "	170	Bergen
SUNDERLAND—				
2	Anglo-American Oil Co.	Lamp	881,850	Philadel.
	(Aureole)			
2	"	Petrolite	583,860	"
SWANSEA—				
7	Mordey, Jones and Co.	.. Lub. Gr.	470	Antwerp
DUNDEE—				
3	D. Alexander and Sons	.. Crude	400	Hamburg
GLASGOW—				
1	Burrell and Son	.. Lub.	6,000	Trieste
1	Anchor Line	.. "	32,810	New York
1	"	.. M. Colza	4,000	"
3	"	.. Lub.	6,240	"
3	Donaldson Bros.	.. "	2,960	Baltimore
3	J. and A. Allan	.. "	44,640	Philadel.
3	"	.. Lamp	9,600	"
LEITH—				
1	W. Graham-Yooll and Co.	.. "	5,840	Hamburg
1	J. Currie and Co.	.. Lub.	1,600	"
1	"	.. "	5,680	"
Total for Week			5,877,220	
Total for the Fortnight			7,189,430	

PATENTS.—(Continued from page 214.)

APPLICATIONS PUBLISHED IN GREAT BRITAIN.

Improvements in Oil Separators.—Aksel Edward Andersson, 10, Floragatan, Stockholm. No. 6117 of 1907.

This relates to an oil separator for separating oil from oil-containing water, which consists of a cistern to which the water is fed, and in which is arranged a float gauge, provided with double side walls, of which the outer wall is perforated (and acting upon an outlet valve for the water) with a view to skim and gather, by means of the perforations, the oil gathered on the surface of the water in the cistern, and simultaneously to regulate the water level in the same.

Process of Rendering Volatile Oils, Balsams, or Substances of a similar or like nature Soluble in Water.

—Dr. Josef Laboschin, 19, Friedrichstrasse, Berlin, Germany. No. 2559 of 1907.

This relates to a process of rendering soluble in water essential oil or oils, balsam or balsams or substances of a similar or like nature by utilising the chemical heat created by stirring alcohol into a saturated aqueous solution of caustic potash or any other alkali, which may in this process take the place of potash, the oil or balsam being added during the time that the chemical reaction between the substances takes place.

Telegraphic Address:—"OLEINE."

Telephone Nos.:—{ 249 & 254 LIVERPOOL.
1990 MANCHESTER.

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVII. (New Series.)

OCTOBER 26TH, 1907.

No. 410.

Editorial Notes.

Assisted by a considerate Government **Progress in** giving a bounty of 52½ cents per barrel upon home produced petroleum, the **Canada.** Canadian petroleum industry is slowly rising from its lethargic state to greater things. A great amount of activity has of late been put forward in the various producing territories, and for the present at all events, crude oil has overcome that tendency evinced a few years ago to steadily decline. Last year alone the production of crude oil in Tilbury and adjacent districts increased over thirty per cent. upon the output for 1905, and it is confidently expected that a still greater increase will be shewn this year. Last year the bounty upon crude oil cost the Canadian Government about £60,000, but even then the total production of refined oil in Canada only served to satisfy about 70 per cent. of the requirements both of the refineries and local consumption, the remaining portion being drawn from the States. It is clear, therefore, that the Canadian producers still have a great deal of work to do before they can bring about an access of production over consumption, although they are certainly steadily progressing.

Each passing day sees the agitation **Shareholders** against the powers that be in connection with the two prominent Anglo-Russian **versus** oil companies grow stronger, and it is **Directors.** now safe to assume that the directors will have no easy time of it in piecing together their defence in such a way as to gain the rapidly fading confidence of even a portion of the shareholders. The latest move on the part of the Baku Russian Co.'s directors is the issuing of a circular setting forth certain phases of the company's affairs in the light that the directors see them. They then proceed to issue a warning to the shareholders "not to be deceived." Personally, we think the warning has come rather late in the day, for the fact that the agitation has recently gained such strength suggests, in itself, that the shareholders are quite determined "not to be deceived" by many statements made regarding the present management of the company."

With soldier-like bravery, the directors **Directors** of the Baku Russian Petroleum Co., **versus** Ltd. are determined to hang on like **Shareholders.** grim death. Not to be outclassed by the fact that some of the shareholders actually know from personal impressions in what state the company's property is, Col. Ivor Philipp's, the chairman, has been to Baku to see the property himself. Our readers may recollect that he was recommended for the position of chairman by his brother,

who made no secret of the fact that while he knew little or nothing about oil, he had nothing else to do, and therefore was deserving of such a position. With that true devotion to duty, almost worthy of an Albert medal, Col. Philipps has recently spent several hours upon the company's property at Baku in order that he might be in a position to intelligently reply to the numerous charges made against the present administration. That reply has already been circulated among the shareholders, and is of such a nature as to compel our taking at least some notice of it. The first point touched upon is that as to the decrease of production. On the authority of the chairman, we now have it that this is due to the strikes, the delay in completing new wells, falling off in the production of the old wells, yet chiefly to the exhaustion of the upper strata—of the company's directors, might here be added. With regard to the borings, the Colonel, no doubt with pride, informs the shareholders that the company's engineers keep in touch with the latest methods, and as a proof of this, the wells are covered with iron or gypsolite. Really, this is very remarkable. The subjects of contracts, the development of properties, the cost of production, and the prices obtained for the company's oil, are all dealt with by Col. Philipps, but the *finale* is worth repeating. The directors, we learn, have a difficult task in managing the company's affairs. Without any intended joke, we would say that this is the kernel of the whole agitation. The Colonel might have gone a little further and admitted what is now common knowledge—the directors have not only a difficult task in managing the company's affairs, but they are absolutely unable to exercise a managerial hand, and this is why everything is going wrong—going from bad to worse.

The Over-Production in Galicia.

After the temporary decline in production last year and at the beginning of the current year, the production suddenly commenced to rise in the early months. The monthly output, which during the whole of last year kept at about 60,000 tons, rose in April to 76,100 tons, in May reached 88,100 tons, in June it was 102,000 tons, in July it was 110,300 tons, and in August it reached 124,400 tons. This great increase in production has been due to rapid development of the Tustanowice field, which has proved exceedingly prolific. All the storage tanks and reservoirs are now filled, and the petroleum industry has been thrown into a serious crisis. In spite of all the efforts made by the producers, no agreement has yet been arrived at with the Petrolea Co., nor has any decision been come to for the formation of a new combine to consist of crude oil producers only. The Galician Provincial Diet has approved the construction of public storage tanks to hold a further 100,000 tons of crude, the cost to be guaranteed by the Provincial Administration. The tanks for the first

100,000 tons previously authorised will be completed, and thrown open for public use towards the end of the year. The details are now being elaborated for the administration of these public storage installations. The producers have guaranteed to the Government that at least 50 per cent. of the capacity of the tanks shall always be utilised, so as to cover the charges for interest and sinking fund on the cost of construction, which amounts to 3,000,000 kronen. Yet the provision of additional storage by no means solves that serious question which now faces the Galician producers.

DEATH OF MR. W. T. BURNINGHAM.

It is with the deepest personal regret that we have to record the death of Mr. W. T. Burningham, of the well-known firm of Messrs. Arthur Brown and Co., oil merchants, Ethelburga House, Bishopsgate Street, London, E.C. The sad event took place on the 12th inst., but was not unexpected, for Mr. Burningham had been ill for several months.

When London's oil trade was in its infancy, Mr. Burningham and Mr. Arthur Sweetland became partners



in the firm of Messrs. Arthur Brown and Co., and from that time—that was in the seventies—until his decease, Mr. Burningham and Mr. Sweetland were sole partners in that firm.

It is impossible to speak too highly of Mr. Burningham's commercial or private life. In the City, where he had a host of friends in and out of the oil trade, he was held in the greatest of respect and recognised as a gentleman of the highest integrity, while his kind assistance was never sought in vain by his colleagues in the trade.

The respect in which Mr. Burningham was held by his many friends in oil circles was plainly noticeable at the funeral which took place on Tuesday week, and which was largely attended by late colleagues in the trade. Among the floral tributes were many last tributes by gentlemen associated with the oil industry to their departed friend. Among these, we noticed wreaths from his partner, Mr. Sweetland, Mr. J. B. McClurg (general manager of the Homelight Oil Co.), Mr. T. C. Burgess (London and Thames Haven Oil Wharves, Ltd.), Mr. H. W. Power, manager of Messrs. Arthur Brown and Co., Mr. George McBurney, of

Liverpool, and Mr. Levick, of Messrs. Crew-Levick, of Philadelphia, etc.

Mr. Burningham leaves a widow and a family of three daughters and one son, the latter having been engaged in the business under his father for about two years.

On behalf of the oil trade in general, we would tender our sincere sympathy to the sorrowing widow and family in their great bereavement.

LONDON OIL SHARE MARKET.

FRIDAY, OCTOBER 25TH, 1907.

The period that has elapsed since our last issue has witnessed an almost unprecedented series of misfortunes in the financial world. The crisis in New York has been specially acute, while the failure of several important firms in Europe has added to the general gloom, which the uncertainty concerning home railway affairs has accentuated.

Fortunately, as we write the severe tension appears to be relaxing in several directions, and the decision of the Bank of England directors not to raise the rate yesterday is looked upon as a good omen.

Throughout the severe fluctuations in most departments the oil section has remained practically stationary, alterations in the few instances where they occur being of little importance.

The only variations to record since our last issue are Shell Transport Ordinary, which have lost 1s. 3d. on balance at 41s. 6d. to 42s. 6d., while the Preference are a closer price at 9 $\frac{1}{8}$ -10 $\frac{1}{8}$. European Petroleum 6 Per Cent. Second Mortgage Debentures are also quoted a closer price at 37-40, and some little dealing has occurred in the First Mortgage Ditto, although there is no actual alteration recorded. Russian 5 Per Cent. Debentures have lost two points at 77-80. Californian Oilfields are also a little weaker at 5 $\frac{1}{4}$ -5 $\frac{1}{2}$, while Bibi-Eybat at $\frac{1}{4}$ - $\frac{3}{8}$ have shed $\frac{1}{16}$.

THE ANGLO-RUSSIAN PETROLEUM COMPANIES' AGITATION.

LATEST DETAILS.

At the request of the Chairman of the Russian Petroleum and Liquid Fuel Co., Ltd., a deputation from the Shareholders' Committee met the Hon. Evelyn Hubbard and Mr. Loudon at the offices of the former on Thursday, when the main question which came up for consideration was the change which the agitation suggests shall be made in the composition of the directorate.

It was explained that the present board were willing that the Shareholders' Committee should appoint two new directors. This, however, the deputation could not accept, and it was stated that nothing less than a working majority on the board would meet with their approval. The meeting therefore proved abortive.

A meeting of the Shareholders' Committee of the Baku Russian Petroleum Co. was held on Thursday, when it was decided to issue another circular before the holding of the annual meeting of the company.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date October 24th, 1907, as follows:—

Most of the mills continue to be well employed, and a fair amount of business is being done at the lowest prices. The financial position is, however, causing some anxiety, tin plate makers having been very severely hit by several recent heavy failures of tin plate merchants. We make prices of oil sizes to-day:—

1c	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	14/- to 14/3	per box.
1c	19 $\frac{1}{4}$ × 14	120	110	14/-	14/3
1c	20 × 10	225	156	20/-	20/3

F.o.b. Wales. Tin lining and iron hooping extra.

THE THIRD INTERNATIONAL PETROLEUM CONGRESS AT BUCAREST.

SECOND SECTION.—CHEMISTRY AND TECHNOLOGY.

At the first sitting of this section of the Congress, which took place on Monday, 9th September, there was a large attendance of Congress delegates, the President—Dr. C. Engler—taking the chair.

Messrs. Manea and Pfeiffer submitted the first paper before the section, this being upon "The Manufacture of Combustible Briquettes from Sawdust or Other Organic Material Mixed with Petroleum Residuals."

Dr. Aisinman afterwards read a paper on "Bustenari Petroleum," in which he dealt exhaustively with its nature and composition. This paper is published elsewhere in this issue.

A discussion arose upon the reading of this paper, in which Prof. Zaloziecki, Dr. Edeleanu, Dr. Dvorkovitz, Arnold Predit and Curt Proessdorf took part.

Dr. Wischin then read a paper on "Special Properties of Roumanian Petroleum, and the Method of Working Necessitated by these Qualities." Dr. Wischin proposed to suppress the deleterious influence which the aromatic hydrocarbons had on the burning of Roumanian oil by means of concentrated sulphuric acid, and protested against the modifications of the burners of the lamps. A discussion followed, in which the following gentlemen took part: Dr. Edeleanu, Dr. Ubbelohde and Dr. Aisinman.

At the afternoon sitting Prof. Dr. Engler read his paper on "The Origin of Petroleum." The author first of all enunciated his theory on the formation of petroleum from animal or vegetable fats by their transformation under high temperatures and great pressure. In the second part of his paper he referred to the latest researches carried out in the Karlsruhe laboratory on the optical activity of petroleum oils, and concluded that optical activity was limited to the fractions distilling between 250° and 300° C. (at 15 mm. pressure), and that cholestrine was the cause of this activity. This latter assertion was an argument in favour of his theory of the origin of petroleum. In conclusion, Prof. Engler rendered homage to the memory of the three scientists, Berthelot, Moissan and Mendeleef.

Mr. Guiselin's paper, which was next presented, was upon "Foreign Petroleum Oils Imported into France." He briefly reviewed the commercial needs of France, and dwelt specially upon the necessity for studying carefully the burning quality of the products manufactured by the refineries. In France, people were greatly impressed with the superior quality of Pennsylvanian oil, which was often mixed with Russian or Roumanian oil. These latter gave to the American oil the consistence which it lacked in itself. The author spoke upon

the objectionable habit of French oil merchants, who considered only the specific gravity. He referred to the importance of the new Franco-Roumanian convention, which had in one respect removed the handicap from Roumanian oil, as against American and Russian, and had already given an impetus to the imports of Roumanian oil into France. He concluded by leaving it to Dr. Edeleanu to find a suitable application for the alkaline residues, which were ordinarily burnt.

Mr. Arnold Predit spoke upon the "Investigation of the Oil of Surakhany (Baku) made in the Laboratory of the Technical Society at Baku." Surakhany oil, known also as "white crude oil," differed, he said, greatly from other Caucasian crude oils. Bebe-Aibat and Balakhany oils were dark in colour, and had a specific gravity of 0.840-0.910. Surakhany oil, which was accompanied by natural gases, was of a light yellow colour, and had a specific gravity of 0.776-0.785. By its chemical properties that oil resembles light American crude oil, and therefore should consist of oliphatic hydrocarbons. An elementary analysis, however, shewed a still greater percentage of carbon, from which it might be concluded that the oil contained hydrocarbons of the $C_n H_{2n}$ series. It had been proved that the oil contained benzol, toluol, xylol, mesithylene and naphtaline. The characteristic feature of Russian petroleum, by the way, was the presence of naphtaline. Surakhany oil, although lighter than other Caucasian crude oils, nevertheless had an analogous composition.

Mr. H. Benssman then spoke upon "Floridin and Its Use for Refining of Petroleum," but Prof. Zaloziecki and Dr. Edeleanu pronounced themselves against the use of "floridin" as a refining medium.

At the sitting the following day, Prof. Hurmuzescu spoke on "The Radio-activity of Petroleum." After referring briefly to the discovery of and the latest experiments with radium, he described the method employed by him in determining the radio-activity of Roumanian petroleum.

Prof. Engler took part in the discussion on this paper, and spoke of the systemisation of the methods of experimenting, and recommends an apparatus used by him, and which he described.

Prof. Zaloziecki read a paper on "The Optical Activity of Petroleum in Relation to its Origin." Prof. Zaloziecki set forth the investigations which he had carried out, together with Dr. Klarfeld, on various Galician oils. Those experiments proved that in addition to active and little active oils, there were also very active oils which in their higher fractions strongly emit

to the right rays of polarised light. Those oils may be either naphthenous or paraffinous. It has been observed that optical activity is an attribute of asphaltous petroleum, and this led the author to the conclusion that there is a connection between the asphalt compounds in petroleum and its optical activity, and that petroleum oils which are apt to transform themselves into asphalt or become resinous are found to contain terpenous hydrogens. Prof. Zaloziecki, in the course of his remarks, spoke of the genesis of petroleum. He upheld the theory of the formation of petroleum from animal and vegetable remains, namely, fats, waxes, resins, *i.e.*, all those materials which Potonié called "Sapropel" or "Faulschlamm." He combated the theory that petroleum was a product of distillation. This succession of original complicated molecules Prof. Zaloziecki calls "bituminous action." The author drew a parallel between the genesis of petroleum and mineral coal, and drew a distinction between the two - the phases of the formation of bitumen and the geological process of carbonisation. For bitumen, the first stage was ozokerite, and the second crude petroleum.

Dr. Engler argued against some of Prof. Zaloziecki's views in regard to the important part which he attributed to organic vegetable remains in the genesis of petroleum.

Prof. Holde read his paper on "The Preparation, Combination and Formation of Petroleum Products of a High Boiling Point and of Asphalts." The author described a method of separating resinous matter from the oily parts in mineral oils and asphalts. For that purpose the oil or asphalt was mixed with an equal quantity of carbon, as much as possible of ashes, and fine quartz sand. The whole was then put into a Grefeld apparatus, and extracted by means of petroleum ether, ether, benzol or chloroform. The absorbing action of the carbons by the use of the above-mentioned solvents resulted in the oily products and resinous products separating according to their quality. The elementary analysis had proved that Prof. Engler's hypothesis that the formation of lubricating oils by the polymerisation of the light hydrocarbons insoluble in water was correct. The author further remarked that the optically active fractions of petroleum, systematised by Prof. Engler, should be examined more closely, so that one might be able to establish the genesis in relation to "cholestrine."

During the afternoon sitting Dr. Haussmann submitted a paper entitled "Study of the Oxydation of Petroleum Hydrocarbons," which was considered in connection with the discussion on the origin of petroleum.

Mr. Rakusine protested against Prof. Zoloziecki's assertion that the theories of the origin of petroleum were still in their first stage, for the investigations made by Prof. Engler himself and others all agreed in their results, and the theories on the origin of petroleum, if not absolutely certain, at least were well founded.

Mr. Kharitchkoff said that the phenomena which contributed to the formation of petroleum were of cosmic origin.

Prof. Zaloziecki said that he was misunderstood by Prof. Engler. He did not contend that petroleum was of vegetable origin, but believed that not to be impossible. He questioned whether cholestrine was the cause of the formation of petroleum, and mentioned other investigations made on the same subject, from which it could be concluded that other materials—asphalt, for instance, might be the cause of such formation.

Dr. Wischin spoke on "The Regeneration of Alkaline Waters of Washing" and on "The Naphthenic Hydrocarbons of Petroleum." The latter might be used for soap making, but their penetrating odour prevented that. They might also be transformed into terpenes, but the latter had no value.

In the discussion on these subjects Messrs. Obreja, Gouchmann, Kharitchkoff, Predit and Dr. Aisinman took part.

Mr. G. Polak submitted a paper on "Benzine and Its Treatment."

Mr. Gouchmann said that he had isolated large quantities of aromatic hydrocarbons, which could be used successfully in colour works, as they did not contain any theophine.

Dr. Edeleanu spoke on this subject, and referred to his researches in the same direction.

The meeting was then adjourned.

BUSTENARI PETROLEUM.

By DR. S. AISINMAN.

Dr. S. Aisinman's interesting paper upon "Bustenari Petroleum," which is referred to in the report of the Second Section of the Congress, is as under:—

Under the collective description of Bustenari Petroleum are now classed the series of crude oils obtained from localities adjoining one another in the Province of Prahova, such as Bustenari de Sus, Mislișoara, Grausor, Recea, Calinet and others.

These localities form a continuation of the meotic anticlinal of Campina, and the crude oil obtained there comes partly from meotic strata and partly from oligocene strata. It is specially characterised by the small percentage of paraffin which it contains.

The average specific gravity of these crude oils is 0.850 to 0.860, but there are some with the extreme limits of 0.820 and 0.926. The composition of Bustenari crude oils is as under:—

Origin of Crude Oil.	Sp. Gr. of 15° C.	Below 100° C.		100-125° C.		125-150°.		150-200°.		200-250°.		250-270°.		270-300°.		Residue.
		%	S.G.	%	S.G.	%	S.G.	%	S.G.	%	S.G.	%	S.G.	%	S.G.	% Cold test.
Bustenari	0.850	6.5	707	12.0	740	10.5	768	15.5	8046	11.0	8386	4.0	874	7.0	884	32.7-15°
"	0.832	12.5	704	14.0	740	8.8	761	12.5	7954	9.2	8414	2.2	—	4.5	882	34.7-15°
"	0.862	7.0	710	10.8	736	8.0	767	15.0	802	9.8	8463	3.0	—	6.8	884	38.8-15°
Mislișoara	0.8565	7.0	704	9.5	744	8.4	761	12.5	792	12.0	832	5.0	860	6.0	880	39.0-20°
Grausor	0.8410	14.5	707	10.8	746	9.2	770	12.0	805	8.0	849	4.5	862	5.5	898	34.7-20°
Faget	0.8272	—	—	29.5	7372	12.5	766	10.0	817	3.5	8532	3.2	—	7.0	8873	37 — 5°
Calinet	0.8563	9.2	7148	9.7	748	10.8	771	15.2	8044	10.0	8438	4.0	859	8.0	879	32.2-15°
Recea	0.8712	—	—	4.1	740	9.0	762	14.5	792	12.4	8356	4.3	8629	9.5	8856	45.2-10°
Average of Bustenari Crude Oils in 1906.	0.857	6.9	707	9.2	7365	9.7	764	14.0	797	10.0	8395	4.9	8610	7.7	885	37.6-15°
Average of Bustenari Crude Oils in 1907.	0.854	10.1	713	9.2	7300	8.3	7565	13.3	7975	10.2	8420	4.0	8746	7.0	8903	37.0-15°

Those figures shew the characteristics of each fraction. With the exception of the light fractions (benzine) which are in direct proportion to the specific gravity of the crude oil, and are, therefore, subject to variations in regard to specific gravity as well as in their percentage. In the other illuminating and solar oil fractions a certain regularity is to be noted.

The percentage and specific gravity of these fractions are:—

		Percentage.		Specific Gravity.	
Between 125 and 150° C. (about)	10	..	760-765		
„ 150 „ 200° C.	15	..	795-800		
„ 200 „ 250° C.	10	..	835-840		
„ 250 „ 270° C.	4	..	860-875		
„ 270 „ 300° C.	7	..	885-890		

The following table shews the tension between the specific gravities of the different fractions:—

Origin of the Crude Oil.	Intermediary Fractions 2 and 3 100-125° x 125-150°	Fractions 3 and 4 125-150° x 150-200°	Fractions 4 and 5 150-200° x 200-250°	Fractions 5 and 6 200-250° x 250-270°	Fractions 6 and 7 250-270° x 270-300°
Bustenari ..	0.024	0.037	0.034	0.035	0.010
Misloara ..	0.017	0.031	0.040	0.028	0.020
Grausor ..	0.024	0.035	0.044	0.013	0.036
Calinet ..	0.023	0.033	0.039	0.016	0.020
Recea ..	0.022	0.030	0.044	0.027	0.022
Average of Bustenari crude oils in 1906 ..	0.028	0.033	0.042	0.021	0.024
Ditto in 1907 ..	0.017	0.031	0.040	0.028	0.036

As will be seen the greatest tension is to be found between fractions 4 and 5, i.e., between the limits of 0.800 and 0.840, representing the illuminating oil distillate. Fractions 6 and 7 are distinguished by a very high specific gravity, compared to the similar fractions of crude oils of other origin. This becomes clearer still, if we compare Bustenari with Campina oil, as is done in the following table.—

COMPARATIVE ANALYSIS OF BUSTENARI AND CAMPINA CRUDE OILS.

Boiling Points.	Crude oil of Campina.		Crude oil of Bustenari.		Difference.
	Sp. Gr.	%	Sp. Gr.	%	
Up to 150° C.	19.5	0.7350	2.75	0.7360	+0.0010
150-200	12.0	0.7958	15.0	0.7928	-0.0030
200-250	11.5	0.8252	8.5	0.8383	+0.0131
250-270	5.0	0.8489	3.5	0.8637	+0.0148
270-300	8.5	0.8633	6.5	0.8894	+0.0261

The treatment of Bustenari crude oil in Roumania is carried on in both by continuous and intermittent methods. In both systems preheating is applied both to the distillate and residuals. This is done not only for economy of fuel, but also because the crude oil contains a large quantity of low boiling fractions, and in this way it is found possible to extract nearly the whole of the benzine before the crude oil is passed into the stills. From the industrial point of view Bustenari crude oil is separated into three principal fractions:—

Per cent.				
1. Crude Benzine	about 30	} of the crude oil.
2. Petroleum Distillate ..	..	..	15
3. Solar Oil ..	..	..	10
Residue ..	..	..	42

The crude benzine of a specific gravity of 0.750-760 is redistilled in column apparatus and yields:—

		Per cent. of crude benzine.	Per cent. of crude oil.
Light benzine ..	0.715-720	about 37	about 11
Heavy benzine ..	0.750	6	2
Light illuminating oil of a flash point of 23° C. ..	0.795-800	57	15

The light benzine contains products from 0.640 to 0.740 and boils between 20° and 120° C.

The heavy benzine comprises products between 0.740-760, and boils between 80° and 140° C.

As will be seen from the table afterwards given in the heavier fraction increasing quantities of non-saturated or aromatic hydrocarbons.

NON-SATURATED AND AROMATIC HYDROCARBONS IN THE VOLATILE PARTS OF BUSTENARI CRUDE OILS.

Sp. Gr. of Benzine.	Sp. Gr. after treatment with 100% sulphuric acid monohydrate.	Difference in Sp. Gr.	Sp. Gr. after treatment with 20% of oleum (100 cc. on 100 cc. benzine).	Difference in Sp. Gr.	Percentage of Sulphuric Products.
0.7005	0.6974	0.0031	6.902	0.0103	2.90%
0.7058	0.7033	0.0025	6.963	0.0095	3.40%
0.7105	0.7084	0.0021	7.002	0.0103	3.86%
0.7144	0.7118	0.0026	7.024	0.0120	4.28%
0.7500	0.7463	0.0037	7.325	0.0175	7.86%

If we separate the benzine within the narrow limits of 2° C., for example, we find at 102° 110° C. a constancy in specific gravity at 751, which at 118 drops to 0.7486 and finally rises to 0.7493. From the fractions between 102-110° C., after washing with ordinary sulphuric acid there has been eliminated by nitrification a combination of nitrate, which, when re-crystallised with alcohol, shews a melting point of 70°, and it has been ascertained that this was Meta-Dinitrotoluol 1 : 2 : 4.

The illuminating oil distillate has a specific gravity of 0.830-832 and a flash-point of 30° C.

The solar oil, known also as gas oil, has a specific gravity of 0.885-890, a flash-point of 100-120° C. The viscosity by the Engler method is—at 20° C., 2.45; and at 50° C., 1.22. The cold test is—20° C. Boiling commences at 280° C., and 74 per cent. distils over between 280° and 350° C. The residue, representing 26 per cent., has a specific gravity of 0.922 and a flash-point of about 150° C. The calorific value is 10,400 calories, and the percentage of sulphur is 0.3 per cent. By gasification in the laboratory at a temperature of 700° C. there was obtained out of 100 kilos. of crude oil, 520 cubic metres of gas. This gas decomposes itself as follows:—

13.9 per cent.	..	Hydrogen
50.6	..	Methane
32.0	..	Heavy hydrocarbons soluble in SO ₃
3.0	..	Oxyde of carbon
0.3	..	Carbonic acid.

By exploitation on a large scale, as is practised at the air gas works, 100 kilos. of crude oil have yielded 850 cubic metres of gas of an illuminating power of 23 to 28 candles.

The residuals have a specific gravity of 0.945-950, flash point about 140° C., and cold test 15 to 20° C. Viscosity by the Engler method, at 50° C., about 10. Calorific value, 12,000 calories. These residuals are an excellent crude material for the manufacture of heavy lubricating oils, which are distinguished from the best Russian brands only by their specific gravity, and somewhat lower cold test. With regard to Bustenari illuminating oil (specific gravity 0.817; flash point 28-29° C.), one had to follow a tortuous route marked by many failures, which the petroleum industry has traversed in its efforts to manufacture an illuminating oil which would answer the requirements of the export trade.

It is only a few years since our young industry had at its disposal the necessary apparatus for establishing scientifically the nature of the crude material employed in the manufacture. He would only recall briefly that period when the industry sought to come near the types established for Russian and American oils. After a thousand experiments they had just come to a knowledge of the properties of the crude oil.

Max Wagner found in Roumanian petroleum a strong dose of "carbures," or oleine bodies, benzolines and also hydrated cyclic bodies, and recognised the importance of that factor in regard to illuminating power. He also proved that experiments made with 100 per cent. illuminating oils mixed for 15 minutes with 100 per cent. sulphuric acid (of 100 per cent.) had yielded the following quantities of "carbures":—

	Per cent.
American Standard white oil ..	14.6
Russian meteor oil ..	10.4
Nobel's Russian oil ..	12.2
Galician oil ..	22.0
Roumanian oil ..	21-24
German oil ..	16.2

The increase in specific gravity caused an increase also in the number of these "carbures." I endeavoured to establish, first of all, the influence of these heavy portions in the oil. Bustenari illuminating oil of a specific gravity of 0.817 and a flash point of 28° C. was distilled with a Glinsky apparatus, and there were eliminated first of all the fractions boiling up to 125° C. This resulted in the oil becoming of a specific gravity of 0.822. This latter was then distilled with and without vacuum, in order to be able to eliminate also the influence of the slightest decompositions, and the fractions were collected separately between 125 and 250° C.

In the distillation under normal atmospheric pressure, boiling commenced at 122° C., and between 122 degrees and 250 degrees was distilled over 88 per cent. of distillate, of specific gravity of 0.8145, whilst the 11.8 per cent. of residuals had a specific gravity of 0.865.

In the distillation with vacuum (8 cm. of the mercury column) boiling commenced at 38° C.; between 38° and 142° C., there was distilled over 87.6 per cent. of a distillate of 0.8149, whilst the 11.7 per cent. of residuals had a specific gravity of 0.8835.

The flash point of the distillate was: by ordinary distillation, 36.3° C.; by distillation with vacuum, 36.8° C.

The capacity for absorbing sulphuric acid in the ordinary distillation was: For the distillate, 6.67 per cent.; for the residuals, 11.66 per cent. In the distillation with vacuum it was: For the distillate, 4.9 per cent.; for the residuals, 10 per cent.

The distillate obtained, either by one or the other way, does not differ in illuminating power from the original product before distillation. In a Kosmos burner of 14 mm. which burnt for three hours, it was found to yield an average illuminating power of 5.43 candles against 5.3 candles of the original oil. The consumption of oil per hour per candle was 5.30 against 5.78. Falling off in light 1.13 per cent. against 1.4 per cent. The tendency to char the wick remains the same in all the three oils.

A second experiment was made with the object of eliminating from the Bustenari distillate of a specific gravity of 0.833, and from a Bustenari illuminating oil of 0.817 the heavy parts only. This resulted in the extraction of a distillate from beginning of boiling up to 250° C.; it had a specific gravity of 0.8154, with a flash point of 27° C. The composition of this oil was:—

	Per cent.	Sp. Gr.
Up to 150° C.	21.0	0.7779
150 to 250° C.	75.66	0.8257
Residue above 250° C.	3.3	0.8775

From Bustenari illuminating oil there was obtained between 107° and 250° C. 92.15 per cent. of a distillate with a specific gravity of 0.809 and a flash point of 27.3° C. Its composition was as under:—

	Per cent.	Sp. Gr.
Up to 150° C.	27.3	0.7788
150 to 250° C.	70.0	0.8170
Residue above 250° C.	0.3	—

After eliminating the fractions boiling up to 125° C. from a heavy oil of 0.809, there has been obtained 96 per cent. of an illuminating oil of a specific gravity of 0.8145 and a flash point of 33.5° C.

Burning tests made with these three oils shewed no appreciable difference compared to the original Bustenari illuminating oil of 0.817.

Consequently, as we could not detect any appreciable influence of the heavy fractions on the illuminating power of the oil, I undertook the investigation of the various narrower fractions of the illuminating oil. The part of the Bustenari illuminating oil distillate of 0.832, boiling between 200 and 300° C. was divided into fractions of 5° C. each, and I then discovered in them a quantity of non-saturated and aromatic hydrocarbons (nitration). The results are given in the following table:—

PERCENTAGE OF NON-SATURATED AND AROMATIC HYDROCARBONS IN BUSTENARI OILS.

Fraction.	Percent. of non-saturated Hydrocarbons.	Percent. of aromatic Hydrocarbons.	Sp. Gr. before Nitration.	Sp. Gr. after Nitration.	Difference in Spec. Grav.
105—200°	2.66	32.52	0.8030	0.7739	0.0291
200—205	1.50	34.92	0.8282	0.8004	0.0178
205—210	4.50	37.38	0.8326	0.8046	0.0280
210—220	10.00	—	—	—	—
220—225	8.00	—	—	—	—
225—230	10.00	28.38	0.8356	0.8249	0.0107
230—235	6.00	—	—	—	—
235—240	8.00	33.60	0.8400	0.8192	0.0208
240—245	8.00	38.70	0.8433	0.8255	0.0178
245—250	8.30	39.00	0.8473	0.8295	0.0178
250—255	10.50	42.00	0.8528	0.8318	0.0210
255—260	10.00	35.40	0.8566	0.8336	0.0230
260—265	11.30	38.40	0.8626	0.8403	0.0223
265—270	10.00	37.20	0.8665	0.8446	0.0219
270—275	7.50	39.60	0.8702	0.8409	0.0293
275—280	11.00	40.80	0.8722	0.8485	0.0237
280—285	7.50	28.80	0.8769	0.8689	0.0080
285—290	—	10.00	0.8791	—	—
290—295	—	10.00	0.8822	—	—
295—300	—	—	0.8842	—	—

The nitration of the fractions in distillation on a large scale at the refineries has yielded:—

Sp. gr. before nitration.	Arom. hydro.	Sp. gr. after nitration.
0.7445	.. 15 %	.. 0.7378
0.7642	.. 24 %	.. 0.7600
0.7806	.. 30 %	.. 0.7672
0.7822	.. 22.5 %	.. 0.776
0.7932	.. 24 %	.. —
0.8217	.. 27.4 %	.. 0.814
0.8373	.. 36 %	.. —

(To be concluded.)

ROUMANIAN PRODUCTION DURING AUGUST.

The total production of crude oil at the Roumanian oil fields in August, according to provisional statistics to hand, amounted to 93,525 tons, against 97,306 tons in July. The production of the various fields was as under:—

	Aug. Tons.	July. Tons.
Prahova District—		
Bustenari	39,293	40,569
Campina-Poiana	18,024	18,445
Moreni	26,442	28,310
Baicoi	4,355	3,048
Tintea	1,027	1,354
Other Fields	1,026	1,207
Total for Prahova	90,167	92,933
Dambovitza District	2,654	2,444
Buzeu District	—	1,143
Bacau District	714	786
Total	93,525	97,306

The August production, when the full figures are available, will probably be found to be at least equal to that of July.

The production of the leading firms was as under:—

	Aug. Tons.	July. Tons.
Steaua Romana	25,652	27,834
Regatul Roman Co.	17,545	14,702
Bustenari Co.	11,504	11,375
Romano-American Co.	8,827	12,042
Telega Oil Co.	4,771	4,558
Trajan Co.	4,274	4,521
Colombia Co.	3,501	3,370
International Co.	3,345	3,350
Aquila Franco-Romana	1,737	1,834

DEATH OF MR. A. S. UNANOFF, OF BAKU.

From Baku comes the news of the death of Mr. A. S. Unanoff, managing director of Messrs. Mantascheff and Co., of Baku. The deceased gentleman was a member of the council of the Baku Petroleum Association for ten years, and in this position did a great deal of useful work for the Baku Petroleum industry, in which his influence was very considerable.

Mr. Unanoff was born at Shusha, in the Baku district, in 1865, and was educated at the Commercial Academy, in Moscow. After completing his education in 1882, he spent a short time in the office of the well-known engineer, Mr. A. V. Barry, of Moscow. In 1884 he went to Baku, and in 1887 acquired, in partnership with Mr. M. A. Unanoff, a kerosene refinery, while he became the founder of the Balakhany Pipe Line Co. When the union of kerosene refiners was formed, Mr. Unanoff was elected to represent the interests of the small refiners in the union. In 1896, he joined the Mantascheff Co., and from that time until his decease he was managing director of that important concern.

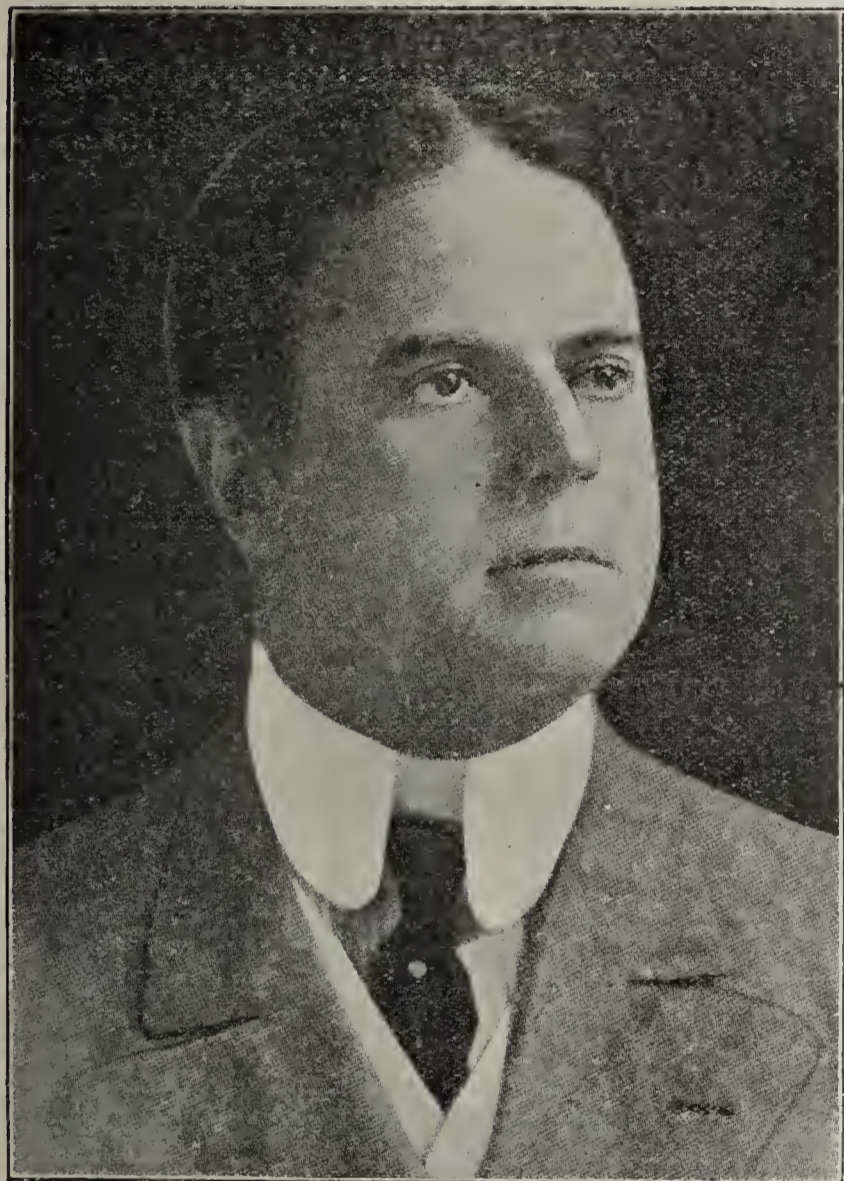
In addition to being a member of the council of the Petroleum Association, Mr. Unanoff was also a member of the Baku Exchange Committee, trustee of the Baku Commercial School, and last spring was elected a member of the Baku Town Council.

Roumanian Spouters.—The following wells of the Steaua Romana have recently commenced spouting: at Campina, well No. 109, yielding 200 tons daily; at Bustenari, wells No. 117, 119, and 215; at Baicoi, well No. 8, yielding 50 to 60 tons daily; and at Policiori (Buzau) a well continues to yield about 200 tons daily.

THE KUHNE-LIBBY COMPANY AND ITS PRESIDENT.

Our well-known American contemporary *Shipping Illustrated* publishes the following interesting article concerning the Kuhne-Libby Oil Co. and its president—Mr. Paul Libby. In view of the fact that many gentlemen in this country are personally acquainted with Mr. W. H. Libby, the honoured chief of the foreign department of the Standard Oil Co., the following article respecting the success of his son—Mr. Paul Libby—will be highly interesting. It is as under:—

Lubricating oil is such an indispensable article in the operation of all machinery, affording so much opportunity for competition in the production of excellent preparations for lubrication, that it is no wonder the manufactures of the Kuhne-Libby Co. have attained



MR. PAUL LIBBY.

the wide-world fame which they now boast. Mr. Paul Libby, president of this company, has devoted practically his whole life to the study of the oil business, and is familiar with the use of lubricants both afloat and ashore. In fact, he knows the value of oil as a matter of contrast, for in the year 1903 he made the passage from Hull to New York in a sailing ship, the "Middlesex," Captain Clark, which did not have any machinery to lubricate in a manner that would drive her ahead any faster than the force of the wind facilitated, and the passage occupied 49 days. He also crossed on the Hamburg-American Co.'s steamer "Deutschland," when she made the record day's run of 601 miles, and with the best lubricants upon her machinery accomplished the passage in five days. Mr. Libby has altogether crossed the Atlantic 42 times in

all varieties of craft, and has incidentally obtained a great deal of information in regard to the oil business from his father, Mr. William H. Libby, who for a quarter of a century has been at the head of the foreign affairs of the Standard Oil Co. and organised all the foreign companies in Europe associated with that corporation. Mr. Paul Libby was born in New York City in 1871, and is a member of the Maritime Exchange, a director of the Oil Trade Association, and a member of the Metropolitan and Lawyers Clubs of this city, in all of which connections he is both popular and esteemed. The management of the business of the Kuhne-Libby Co. has been ably looked after by Mr. L. G. Flitz, vice-president and secretary, and by Mr. C. H. Mantler, treasurer. The offices of the company are at No. 60, Water Street, and the mass of correspondence from foreign countries which constantly adorns the company's mails illustrates the large trade which they have developed in numerous parts of the world, so that the cargo steamers from this port all consider them valuable customers. One of the principal articles of the manufactures of this company is the Marvel lubricating cooling car grease for railway purposes, which during the past ten years has had a most successful and increasing sale, and has been brought into extensive demand both at home and abroad. The circulars of the company in regard to their manufactures are printed in Portuguese, Spanish and Russian, as well as in English, and it is not saying too much to characterise the reputation of the company in the way of all that is satisfactory as equal to the personal reputation of Mr. Libby.

AMERICAN PIPE LINE RUNS DURING SEPTEMBER.

Another large decline was recorded in the American pipe line runs for September, which were the smallest of the current year, while the shipments were the heaviest on record. The shortage in receipts from the high grade oil fields has been more than made good by the increased production of the Illinois and Mid-Continent sections. The gross stocks held by Eastern pipe lines, which are now made up of oil from all the producing regions that are connected by pipe line with the Eastern markets, declined about 6,000 barrels a day in September. Stocks west of the Mississippi continued to increase, and are now the largest ever known.

The total receipts for the various oil-producing sections shew the following daily averages during September:—

Field.	Barrels.
Pennsylvania	63,161
Lima-Indiana	23,971
Illinois	85,353
Mid-continent	135,988
Total	308,473

The stocks west of the Mississippi held by the Prairie Oil and Gas Co. amounted to 29,099,161 barrels at the close of September. The stocks held by the Gulf Pipe Line and the Texas Company were estimated at 3,500,000 barrels, which would make the total stocks in the tanks of the pipe line companies west of the Mississippi 32,599,161 barrels.

THE PETROLEUM FIELDS OF PERU.

A FEW DETAILS.

Signor Faustino G. Piaggio and Co., pioneers in the petroleum producing business in Peru, are said to have 100 wells now producing 150 barrels of petroleum daily. This oil compares evenly with the California product. It has an asphalt base and about thirty per cent. of it is refined into the more volatile oils, as benzine, gasoline, etc. The company has a complete refinery at Zorritos, 600 miles north of Callao, where the oil is shipped in tank steamers along the coast. This refinery is perfectly equipped with stills and storage and has cooper shop and canning plant.

The Peru oil is found on the *plya*, or narrow strip of land between the Andes mountain range and the waters of the Pacific. This strip is so narrow that in high tide the waves wash over it. Railroad iron is used as piling and driven into the sand as a foundation and protection for the derrick. This surface ocean sand is anywhere from five to fifty feet in depth. Drilling is done with a standard rig and the hole started inside a thirteen-inch casing. This casing drops down as the sand is drilled out. At the bottom of this sand a ten-inch casing is inserted and continued to shut off the first salt water. Next eight-inch casing is used, then six-inch, then four and one-half inch and finally three-inch. If they fail to get oil with the latter the hole is abandoned. It is necessary, on account of the soft formation, to use casing all the way down. The wells vary in depth from 180 to 1,760 feet. The producing formation is not a sand, being either soft dirt or large pebbles. The wells are not shot, all producing natural, while some of the deep ones having a sufficient pressure to flow through the casing.

There is a small amount of gas and a remarkable thing in connection with the oil is its heavy character. When it is pumped from a well it may be shovelled into a bucket and carried to the boilers for fuel. There is no railroad at Callao, the oil being sent on tank steamers to Zorritos. Oil is used for fuel. The wells are pumped with a kerosene engine and the ordinary American power. The same tubing and packing used in the Pennsylvania field are used there. Mr. Piaggio's company has been producing oil at that location for thirty-five years. The London Pacific and the Peruvian Corporation are other large producers.

Twenty Per Cent. Dividend.—Messrs. Mirzoeff Bros., petroleum producers and refiners, at Baku, have published their accounts for the 13th financial year 1906. These shew a revenue of 3,105,063 roubles, and an expenditure of 1,639,868 roubles (in 1905 the figures were: revenue, 1,333,037 roubles; and expenditure, 2,105,795 roubles). The company's property (consisting of oil fields at Saboontchi, Balakhany and Surakhany, pipe line for oil, pipe line for water, kerosene and lubricating oil refinery, chemical laboratory, mechanical workshop, cooperage, sailing fleet on the Caspian Sea, etc.) is valued at 4,695,192 roubles; materials and goods, 661,815 roubles; debtors, 612,118 roubles; cash and securities, 968,841 roubles. The liabilities are: share capital, 3,210,000 roubles; depreciation fund, 395,953 roubles; reserve fund, 68,827 roubles; creditors, 800,911 roubles; Government loan, 800,000 roubles; sundries, 157,081 roubles. The profit for the year is 1,465,194 roubles (against a loss of 772,758 roubles in the preceding year). A dividend of 20 per cent. has been declared. For the preceding year a dividend of 8 per cent. was paid out of the reserve fund.

RUSSIAN AND ROUMANIAN NOTES.

The Ferghana Petroleum Company, Tchimion, propose issuing debentures of a nominal value of 1,000,000 roubles. The debentures will be secured on the company's freehold property, valued in the balance-sheet at 2,546,886 roubles.

Roumanian Production.—The crude oil production in Roumania remains stationary on the level of the last few months. A number of productive wells have recently been burnt down. The damage was not very heavy, and covered by insurance.

Roumanian Exports.—Exports of Roumanian petroleum products continue very active. According to provisional statistics, the total exports of petroleum products from Roumania during the first nine months of 1907 amounted to about 300,000 tons, against 240,000 in the corresponding period of 1906.

Will the Batoum Case Oil Factories Re-open?—From Batoum comes the report that the question of the re-opening of the Rothschild case factories has again come to the front. The manager of the works is at present in Paris, and his sojourn there is said to be connected with a pending decision as to the fate of the case factories.

The Russo-American Petroleum Refining Company, owning a refinery at Kuskovo, in the Nijni-Novgorod district, has in its 33rd financial year 1906-7, realised a net profit of only 25,621 roubles on a turnover of 1,665,378 roubles. It was resolved to pay a dividend of 6 per cent. on the capital of 375,000 roubles. The head office of the company is in Moscow.

The Roumanian Boring School.—Owing to the very numerous applications received at the Roumanian Ministry of Domains for admission to the boring school at Campina, the Minister has decided to increase the number of pupils at that institution. It has also been decided to raise the standard of general education for applicants for admission to the school.

The Steaua Romana.—A meeting of the directors of the Steaua Romana recently took place in Berlin. The balance sheet and report for the past financial year were approved. The accounts shew a net profit of 6,614,129 francs, of which 4,069,047 francs are applied for amortisation, and the balance is to be distributed as a dividend of 8 per cent., against 6 per cent. paid the previous year.

Encouraging News from Sakhalin.—A telegraphic report from Sakhalin announces the discovery by a mining engineer named Kuznetzoff of a new oil field and a vast petroleum lake at a distance of about eight miles from Nobilsky Bay. Mr. Kuznetzoff is bringing back with him samples of the oil. Mr. F. Kleie, a well-known mining engineer and prospector for petroleum in Sakhalin, has recently started for the northern part of the island with a party of 300 Japanese workmen.

A Well-Deserved Protest.—Messrs. Nobel Bros. have protested to the Russian Government against the regulations now in force on the Russian railway in regard to the loss of oil by leakage. They ask for a reduction in the permissible leakage from 2 per cent. to 0.75 per cent, and to relieve senders of goods from responsibility for loss through defects in tank waggons, as the control of the tank waggons is vested in the railways, who do not admit any interference by the owners.

Pipe Line Company's Profits.—The annual meeting of the First Bustenari-Plopeni Pipe Line Co. took place recently. During the past year a profit of 43,220 francs was earned on a capital of 1,000,000 francs. The smallness of the profit was due to the fact of the prolonged inactivity of the Plopeni refinery caused by its transfer from the Aquila Franco-Romana to the Colombia Co. The main revenue of the Pipe Line Co. is derived from the charges for delivering crude oil to that refinery.

An Unsatisfactory Report from Ferghana.—News from the Ferghana oil field shew the state of affairs there to be very unsatisfactory. The production of crude oil is declining, and there are days when it does not exceed 2,000 poods, whilst last year it was more than 20,000 poods. Some of the boreholes yield nothing but water. The benzine sold under contract has proved of such low quality that the buyers refuse to take it. The kerosene refinery is now ready, but it is still far from certain whether it will be started at all. In view of this, the demand for Baku kerosene is growing in the district.

A Study of the Properties of Roumanian Petroleum.

By Dr. L. EDELEANU.

Some four years ago we published in the pages of the REVIEW a somewhat lengthy reference to a publication which had at that time just been issued upon "Roumanian Petroleum: its Composition and Physical and Chemical Properties," by Dr. L. Edeleanu. Comprehensive as that publication was, however, it omitted to go into details upon the important subject of the yields of industrial products from the crude oil of Roumania. That defect has now been remedied in the new edition recently issued, and which was published in time to allow its presentation to the delegates attending the Third International Petroleum Congress at Bucarest a few weeks ago.

Like the editions which have preceded it, the present publication first minutely describes the chemical composition of Roumanian petroleums, and then proceeds to deal with their physical and technical properties.

Then comes a very important chapter in the book, in which the properties of the products of distillation are carefully described.

The author of the work deals at the outset with the yield of benzines from Roumanian crude oils, remarking that these shew very large differences in the proportion of benzine and illuminating oils. Whilst the light crude oils from Casin, Tetcani and Parjol-Bacau, and a part of those from Baicoi contain from 38 to 47 per cent. of crude benzine distilling up 150° C., in the crude oils of Gura-Ocnitza and Sarata-Monteoru the proportion of these products barely reaches 20 per cent.

As regards the two most important oil-bearing fields, viz., Campina and Bustenari, the author mentions that, although the crude petroleums from those localities have specific gravities differing but slightly, and although they both belong to the medium type, yet they differ in respect to the proportion of benzine, the oil of Bustenari being much richer in benzine than that of Campina, the percentage up to 150° C., in the case of Bustenari petroleum, being 25, and in the oil from Campina 20 per cent. The proportion of the benzine of $\cdot 717$ specific gravity obtainable by rectification of the distillate up to 150° C. varies according to the crude oil. The largest proportion of this benzine is found in the crude oils of Matita-Ochisori, Apostolache, Bustenari and Baicoi, where the quantity varies from 15 to 25 per cent., while the smallest proportion is found in the crude oils of Gura-Ocnitza, Moreni, Sarata-Monteoru and Campina, where the quantity of benzine is between 5 and 10 per cent. By the redistillation of the benzine of $\cdot 717$ and $\cdot 718$ gravity and collecting fractions at intervals of 10° C., it is found that two-thirds of this benzine distils below 100° C. and almost all the rest distils between 100° C. and 130° C., leaving a residue of from 2 to 3 per cent. only. The benzines from the petroleums of Matita and Apostolache form an exception, as they distil between higher limits of temperature leaving a residue of 10° above 130° C.

Dr. Edeleanu then proceeds to refer to the proportion

of illuminating oils to be found in Roumanian petroleums, and incidentally mentions, by way of explanation, that the hydrocarbons distilling between 150° C. and 300° C. form in general that product which finds an extensive use as illuminating oil. On account of the variation in crude oils, the fractions included in these limits of temperature do not always give a lamp oil of the same quality. For instance, in the crude oils whose higher fractions have high specific gravities, the limits of temperature between which an oil of good burning quality is to be obtained are narrower than in petroleums whose high fractions have a relatively small specific gravity.

In the case of the Bustenari crude, to obtain a kerosene of a specific gravity between $\cdot 805$ and $\cdot 810$ with a standard flash point, the limits of temperature are 130° C. to 260° C., and the first portion of the fractions that distil immediately after 260° C. has a specific gravity of $\cdot 865$, whilst from the Glodeni crude oil one obtains a lamp oil with the same specific gravity as that from Bustenari, and a flash-point of more than 30° C., by separating the distillates between 130° C. and 320° C. The specific gravity of the fraction that distils immediately after 320° C. is only $\cdot 844$.

The distillates which are from all points of view the most suitable to be employed as illuminating oil, are those which can be obtained between the limits of $\cdot 755$ and $\cdot 860$ specific gravity. This higher limit can well serve as a standard in conducting distillations so as to obtain an illuminating oil of superior quality. In the case of light petroleums, like those of Campeni-Bacau, Tetcani, and Baicoi, and to some extent that of Glodeni, the specific gravity of the illuminating oil fractions of the distillates reaches only $\cdot 840$. The crude oils from which good illuminating oils in fair quantity are to be obtained are those from Campeni-Parjol, Tetcani, Casin, Glodeni, and Baicoi, and here the quantity of such oil varies from 40 to 60 per cent.

In the case of Campina and Bustenari petroleums, which represent the greatest part of the production of Roumania, the proportions of illuminating oil are different, varying between 30 and 35 per cent. at Bustenari to 45 per cent. at Campina. From petroleum of high specific gravity such as that from Gura-Ocnitza only a maximum of 20 per cent. illuminating oil can be obtained.

The author then proceeds to deal with the physical properties of illuminating oils, and afterwards treats in a most explanatory manner the residues—that product which remains after the distillation up to 300° C. He points out that this is a viscous mass of high specific gravity, which in the case of the Roumanian oils, varies from $\cdot 860$ to $\cdot 990$. These residues find many applications. Sometimes they are used in a crude form as a combustible, but after being submitted to different technical processes, the residues form the raw material

for the preparation of vaselines, paraffin and lubricating oils, while after being submitted to a destructive distillation, the residue produce gaseous products, and tars rich in aromatic hydrocarbons, the latter forming the raw material in the colour industry.

The use of residues as liquid fuel is becoming more and more general on account of the advantages in price and quality that residuals offer. In the regions where coal is absent and where crude oil is to be found in great quantity, it is used for the generation of motive power for locomotives and steamers, for the iron industry and metallurgy, and especially in Siemens-Martin's regenerative furnaces for producing high temperatures.

In Roumania, the application of residuals as a fuel has recently undergone a great development, for in addition to the petroleum producing operations, which alone consume about 9,000 waggon loads per annum, the locomotives of the Roumanian railways, the steamers of the Roumanian maritime service, and a great number of the principal industrial establishments have adopted the liquid fuel. The most advantageous residuals from Roumanian oils for the purposes of liquid fuel are those derived from petroleum poor in paraffin, such as those of Bustenari, Moreni, and a part of Baicoi. The properties which are usually taken into consideration are specific gravity, viscosity, and the calorific value. In Roumanian residuals the calorific value varies between 10,800 and 11,000 calories.

The determinations made with Berthelot's calorimeter, with Mahler's bomb of six different Roumanian residuals was as under :—

	Thermal units.
Bustenari residue	10,896
Campina	11,070
Baicoi	10,936
Gura-Ocnitza	10,793
Solonti	10,850
Lucacesti	10,956

Nearly all the residues of Roumanian petroleum contain more or less paraffin. The richest and most suited for the manufacture of paraffin are those of Campeni-Bacau, Predeal (valley of the Teleajen river), Campina, Tetcani, Moinesti, Casin and Apostolache, but on the other hand the residues of Gura-Ocnitza, Telega, Bustenari, Tintea and Sarata-Monteoru contain very little paraffin.

The quantities of paraffin contained in the oil between 300° C. and 400° C. by distillation of the residues at low pressure were as under :—

Origin of residue.	Paraffin by weight. Per cent.
Campeni-Bacau	18.0
Tetcani	14.7
Moinesti	12.4
Campina	12.0
Predeal	12.0
Casin	10.5
Apostolache	9.2
Solonti	7.5
Lucacesti-Deal	5.9
Baicoi	5.0
Bustenari	0.3

But the most important employment of Roumanian residues is for manufacturing lubricating oils, but in connection with this it must be stated that many of the

Roumanian residues, on account of the great quantity of paraffin which they contain, are unfitted for the functions of a lubricant. Of all the residues derived from Roumanian petroleum, the most suitable for the manufacture of lubricating oils are those of the following localities :—Tega, Tintea, Gura-Ocnitza, Moreni, Bustenari and Sarata-Monteoru. From these residues machine oil with a viscosity of more than 50 at 20° C., in quantities varying between 35 per cent. and 50 per cent., and cylinder oils with a viscosity of 18-35 at 50° C., in quantities of 10 to 15 per cent. are obtained. Generally speaking, the specific gravity of the lubricating oils obtained from Roumanian petroleum is higher than that obtained within the same limits of temperature from Russian oils, yet as the qualities of a lubricating oil do not depend upon its specific gravity, this should not be taken as a factor in determining the quality of a lubricating oil.

BAKU PRODUCTION DURING SEPTEMBER.

The total production of crude oil at the Baku oil fields during September (o.s.) amounted to 36,688,173 poods, to which Bebe-Aibat contributed 11,104,176 poods. During the month spouters at Bebe-Aibat yielded 815,784 poods and 154,760 poods at Saboontchi.

The production of the leading firms was as under :—

	Poods.
Nobel Bros.	5,700,000
Caspian and Black Sea Society	2,700,000
Mantascheff and Co.	2,300,000
Baku Naphtha Co.	2,100,000
Mirzoeff Bros.	1,300,000
Baku Russian Petroleum Co., Ltd.	1,200,000
Naftalan Co.	1,100,000
Aramazd Co.	1,100,000
Schibaieff Petroleum Co., Ltd.	1,000,000
Moscow-Caucasian Co.	1,000,000
Bibi-Eybat Petroleum Co., Ltd.	900,000
Russian Petroleum and Liquid Fuel Co., Ltd.	900,000
Pitoeff and Co.	800,000
Zoubaloff	800,000
Russian Naphtha Co.	800,000
Nagieff	800,000
Tiflis Co.	600,000
European Petroleum Co., Ltd.	500,000

AN ECHO OF THE WRECK OF THE "SILVERLIP."

Captain Thomson and Sir Boverton Redwood, who were commissioned some time ago by the Board of Trade to enquire into the loss of the tank steamer "Silverlip" have recently issued their report. They express their opinion that it is highly improbable that the vapour from the tanks became ignited by a spark formed by the scraping of the steel bulkhead, and therefore they regretfully look for the cause in some reckless and prohibited act committed by one or other of the firemen. Both gentlemen therefore recommend that the clause dealing with smoking upon tank steamers should be amplified so as to include the non-carrying of matches in any part of the ship.

Lest we Forget—No firm can become truly great without judicious advertising. Shall we send you the REVIEW's rates?

PROSPECTING FOR PETROLEUM IN NIGERIA.

AN INTERESTING CIRCULAR.

The prominence which has been recently given to Nigeria in connection with the use of liquid fuel for the British Admiralty—for the English Government look to Nigeria as being one of the chief sources of future supply with every confidence—causes much importance to attach to the very explanatory circular which has been issued during the present week to the shareholders of the Nigeria Investment Co.

This circular, which has been drawn up in order to place before the shareholders the actual position of the company, states that the exclusive licence to drill for and work mineral oils under the Mining Regulation (Oil) Ordinance, 1907, over the area of 225 square miles in Southern Nigeria, has been duly granted to the British Colonial Petroleum Corporation, Ltd., and that company now has the right for a period not exceeding four years from March 27th last to drill for and work mineral oils within such area, prior to taking up leases for a period not exceeding 50 years over any parts of same not exceeding 40 square miles in all. The ordinance provides that His Majesty's Government shall have the right of pre-emption of all crude oil raised, won or gotten from the area, subject to the licence or lease, and of all products of the refining or treatment of such oil. The price to be paid by His Majesty's Government for all such oil or products to be either the subject of a separate agreement, or, if no separate agreement, then the price to be the market rate ruling at the time for the particular oil or product delivered free-on-board at the nearest port of shipment in the colony.

Your directors would remind you that by the agreement entered into with the Nigeria Bitumen Corporation, Ltd., the British Colonial Petroleum Corporation, Ltd., was duly registered with a nominal capital of £200,000, divided into 200,000 ordinary shares of £1 each, with the object of acquiring the assets and undertaking of this company. The purchase consideration payable to this company for its assets and undertaking is 100,000 fully paid ordinary shares of £1 each in the British Colonial Petroleum Corporation, Ltd., and the shareholders of this company will also have the right to subscribe for a further 25,000 of such ordinary shares credited with 5s. paid up thereon—that is, one share of £1 each credited with 5s. paid up thereon for each £1 share now held in this company. The Nigeria Bitumen Corporation, Ltd., undertakes to subscribe or to obtain responsible subscribers for a further 10,000 shares of £1 each in the capital of the British Colonial Petroleum Corporation, Ltd., at par, and the balance, namely, 58,000 shares, will be held in reserve for future issue. Under the agreement with the Nigeria Bitumen Corporation, Ltd., it is provided that the issue of the working capital shares of the British Colonial Petroleum Corporation, Ltd., shall be made within six months from the date thereof, on a date to be mutually agreed between this company and the Nigeria Bitumen Corporation, Ltd. This provision was inserted so that the issue might be made at the time when the market conditions are most advantageous to the shareholders of this company.

The directors of the British Colonial Petroleum Corporation, Ltd., in order that that company might be certain of obtaining the full amount of working capital agreed upon, have underwritten with responsible persons the issue of the 25,000 shares, to be issued with 5s. paid up thereon, so that, even though any shareholder of this company should not exercise his rights, the whole of these 25,000 shares would still be duly subscribed for. The assets and undertaking of this company to be acquired by the British Colonial Petroleum Corporation, Ltd., are as follows:—(a) The exclusive licence to drill for and work mineral oils over the area of 225 square miles, granted under the Mining Regulation (Oil) Ordinance, 1907; (b) 24,843 shares fully paid, in the Société Française de Pétrole, Ltd.; (c) 4,837 shares, 10s. paid, in the Société Française de Pétrole, Ltd.; (d) 1,300 fully paid shares in the Nigeria Bitumen Corporation, Ltd.; (e) 680 shares 10s. paid, in the Anglo-Mexican Oilfields, Ltd.; (f) an interest in an oil-bearing area in the Gold Coast Colony, West Africa; (g) an interest in three oil-bearing concessions in Portuguese West Africa; (h) an interest which will shortly be represented by approximately 4,000 fully-paid shares in the Anglo-Mexican Oilfields, Ltd.; cash assets, and other small share holdings. The proposed issue will provide the British Colonial Petroleum Corporation, Ltd., with ample working capital, and 58,000 shares, as stated above, will be held in reserve for future issue as and when required. Under the terms of the agreement between this company and the Nigeria Bitumen Corporation, Ltd., the latter company undertakes for 10 per cent. of the net

profits to act as agents and managers of this company's property in Nigeria which will save the British Colonial Petroleum Corporation, Ltd., a very large amount of the expenses of organisation, transport, etc., and will also give the new company the benefit of the experience gained by the Nigeria Bitumen Corporation, Ltd., during the last two years it has operated in Nigeria. The Nigeria Bitumen Corporation, Ltd., has further undertaken to provide the necessary cash on behalf of the British Colonial Petroleum Corporation, Ltd., so that drilling may be commenced without delay, and with this object in view the plant has already been ordered.

Mr. Drader has communicated the following particulars with regard to the oil line to the directors of the Nigeria Bitumen Corporation, Ltd., by whose courtesy we are enabled to publish the same for your information:—"My assistant and I have investigated the probabilities of oil in the Investment Co.'s area, and I am pleased to be able to state that I was able to trace the oil line straight away from where we are now drilling. I have been now able to trace it straight through, interrupted in places, but, any way, continuous to the Investment area, and the indications shews, etc., that I have found there at least as good as those that we have in our bitumen property. I shall have no difficulty, therefore, in locating the place for the first hole. On the whole, I consider that the oil line goes from the Nigeria Bitumen Corporation's area right through to the area covered by licence No 7 belonging to the Investment Co. I consider it a good thing for the whole business to be drilling on this spot with a third rig." Your directors consider that the shareholders are to be congratulated upon the assets which this company now holds, and upon the extremely favourable views taken by all the oil experts who have visited the properties in Nigeria, the Côte d'Ivoire, the Gold Coast Colony, Portuguese West Africa and Mexico, in all of which the company has acquired interests, and also are of opinion that the arrangements come to with the Nigeria Bitumen Corporation, Ltd., are extremely advantageous, and will tend in every way to develop this company's property in Nigeria in the most expeditious and economical manner.

Referring to the shareholdings of this company:—(a) In the Société Française de Pétrole, Ltd., your directors are pleased to inform you that work on the company's property is proceeding satisfactorily, and that boring should shortly be commenced, and they consider that your interest in this company will prove of great value. (b) In the Gold Coast Colony the property comprises about 20 square miles. It was reported on by Mr. D. P. Brown, whose report was confirmed by Mr. Bukojemski, in February, 1907, who, in his written report, says:—"I am very enthusiastic about this concession, as I not only found abundant traces of oil, but I saw myself, in the Albany River, as well as in the Dominic Lagoon, oil bubbles with gas coming out uninterruptedly. These signs furnish the best proof that the oil must be deposited in the deeper bores, and although the ground is covered with clay stone, the formation is yet so strong that the oil comes out to the surface." (c) The three areas in Portuguese West Africa were originally reported on by Senor Joas Carlos Costa in December, 1904, extracts of which are as follows:—No. 1 comprises an area of about 10 square miles, on which there are petroleum infiltrations springing from the bed of a small river, called Sampla. At the opposite end of the area there is a lake, or natural well, measuring about 10 feet, and not more than 16 feet deep, containing bitumen in a highly liquefied state. In this lake there are permanent eruptions of bitumen, water and gas. The samples taken from this spot have been analysed in London, and they shew a percentage of nearly 60 per cent. of oils in spite of being taken from the surface. No. 2 extends over a surface of 250 acres, where the petroleum infiltrations are very frequent, and the visible oil fields embrace an enormous extent. Veins of bitumen have also been found. No. 3 comprises an area of about 10 square miles, and is situated immediately on the coast. The presence of petroleum is easily detected here on account of the oily spots that float on the surface of the sea water, also by the strong and peculiar smell of petroleum, and, furthermore, by slight infiltrations in the rocks.

The analysis of the samples taken at the infiltrations on the rocks and on the shore gives a percentage of 56 per cent. of oils. Mr. William Jones, M.I.M. and M., accompanied by a specially-selected representative of the Portuguese Government, is now engaged in the examination and inspection of these areas.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	5- ³ / ₄
Baku Russian Petroleum ..	£750,000 Ord.	£1	3/0-3/6
.. .. .	£650,000 5 ¹ / ₂ % Pref	£1	4/9-5/3
Bibi-Eybat Petroleum Co. ..	£250,000 Ord.	£1	5/6-6/6
Californian Oilfields ..	£250,000 Ord.	£1	5 ¹ / ₂ -5 ³ / ₄
Commonwealth Oil Co. Pref	18/- paid up(Prem.)	£1	5 ¹ / ₂ -5 ³ / ₄
.. .. .	Def. £1 fully paid	£1	11 ¹ / ₂ -11 ³ / ₄
European Petroleum ..	£550,000 Pref.	£1	1/0-2/0
.. .. .	£550,000 Ord.	£1	0/6-1/6
.. .. .	£376,000 Deb.	£100	73-76
Russian Pet. & Liquid Fuel ..	£500,000 6 ¹ / ₂ % Pref	£1	3/6 4/6
.. .. .	£600,000 Ord.	£1	2/6 3/6
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	1-1 ¹ / ₂
.. .. .	£575,000 Ord.	£1	2/3-2/9
Shell Transport & Trading ..	£2,000,000	£1	42/0-43/0
.. .. .	£1,000,000 Pref.	£10	9 ¹ / ₂ -10 ¹ / ₂
Spies Petroleum Company ..	£312,500	10s.	6/6-7/0

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Oct. 21st.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	515	518
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,400	4,450
Mazout Co.	250	400	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-	250	150	152
cheff & Co.	250	—	—
Neft Co.	250	—	—
Nobel Bros.	5,000	10,350	10,450
.. .. .	250	—	—
Rops and Co. V... .. .	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading	250	—	—
Co.	250	—	—
.. .. . (Second Issue)	250	—	—

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 os. 6d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 5s. od.
Burmah Oil, Ord.	£1,100,000	£1	£3 5s. 9d.
Do. Pref.	£250,000	£1	£1 5s. 6d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£6 16s. 6d.
Do. 5% Pref.	£18,900	£7	£4 13s.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 17s. 9d.
.. .. . (17s. paid)			
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	£13 5s. od.
.. .. . (17s. paid)			
Do. 6% Cum. Pref	£100,000	£10	£13 5s. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£3 2s. 9d.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 10s. od.
Do. "B" Deb...	£150,000	£100	£170.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins.
Arnhemsche Petroleum Mij.	50	1,000
Aurora (Deb. 5%)	90	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	122 ³ / ₈	50
.. .. . (Deb. 4 ¹ / ₂ %)	99	1,000
Gaboës	2 ¹ / ₂	—
Holl. Rumeensche Petroleum Mij. ..	25	1,000
Int. Rum. Pet. Mij.	91	500
Java Petroleum Mij. (Ord.)	—	1,000
.. .. . (Pref.)	14 ⁷ / ₈	—
Koninklyke Nederl. Pet. Mij. Shares ..	245 ¹ / ₂	250-1,000
.. .. . Share certificates ..	241 ³ / ₈	1,000
Mœara Enim Petroleum Mij.	123	100
.. .. . 1-1,000 Oblig. 5	—	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij. ..	—	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	—	—
.. .. . (Deb. 5 %)	—	—
Panolan Maatschappij Cert.	290	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	114 ¹ / ₄	1,000
.. .. . (Common)	—	—
Sumatra-Palembang Petroleum Mij ..	82 ⁵ / ₈	500
Tarakan Petrol Mij.	32	—
Zuid Perlak Petrol. Mij. (Pref.) ..	68	—

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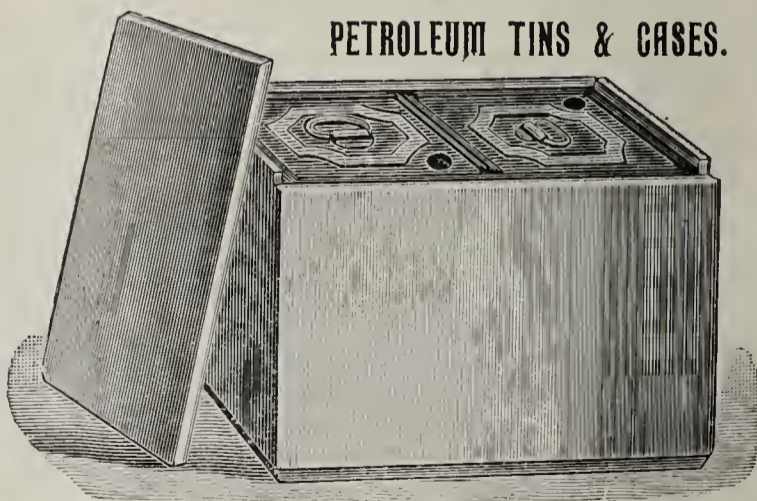
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SATURDAY, OCTOBER 26TH, 1907.

PIPE LINES AS COMMON CARRIERS.

OUR excellent contemporary—the *Oil City Derrick*—publishes in one of its recent issues a highly-interesting article upon the question of pipe lines being common carriers, this subject being one which is now attracting considerable attention throughout the petroleum producing States of America.

The rulings of the Government have clearly expressed it that those who construct pipe lines must necessarily make them common carriers of oil, but the various interests which control that net-work of pipe lines in the American fields, are of a totally different opinion; sooner or later, therefore, one of these two opinions must prevail, and in the meantime, the American petroleum industry must inevitably be in the throes of something which borders upon a crisis.

The present admittedly serious position needs some explanation before it can be properly understood, for it has been brought about primarily not as a result of Governmental interference, but because of the great and almost unprecedented progress which has been made in the development during the past few years of

the Mid-Continent oil fields, included in which are those prolific territories of Kansas and Indian Territory. It is the rapid development of these fields that has created the present dead-lock, for it stands to reason that had the petroleum production of the extensive areas not suddenly become so enormous, there would have been no necessity for the question of the quick transport of the oil to have arisen, and consequently the Government would not have felt it its duty to legislate in this direction.

Those of our readers who have followed the course of events in the American oil industry will recollect that simultaneous with the growth of production in the Mid-Continent fields, which reached phenomenal limits last year, the fields of Texas and Louisiana which supplied the large refineries on the Gulf coast commenced to record a decreased production, and soon it was evident that if the Texas refining industry was to prosper, it was imperative that oil would have to be drawn from other sources.

It is not surprising therefore to find that several influential concerns having refining interests in Texas turned their attention to the Mid-Continent fields early last year, and decided to lay down trunk pipe lines which would connect up with the Texas system and thus bring to the Gulf coast refineries oil from a new and almost limitless source. The Prairie Oil and Gas Co., the pipe line branch of the Standard Oil Co., had from the earliest developments been most energetic in the fields of Kansas and Indian Territory in which it had constructed at great cost a remarkable net work of pipe lines, which in their turn linked with the great trunk line, *via* Whiting to the Atlantic seaboard, through Pennsylvania. But even the energy of the Prairie Co. has not been sufficient to cater for the care of the daily increasing production, and the consequence was that stocks accumulated at an alarming rate, and producers being as anxious to get the great surplus off their hands as were the Texas refiners to draw from this new source of supply for a large part of their requirements.

Then came the propositions for the construction of several trunk lines to the Gulf of Mexico, and concurrently came the desire of the Government to legislate for this innovation. At the commencement of this year, the Secretary of the Department of the Interior promulgated regulations governing the construction and operation of the pipe lines, and these regulations declared that all pipe lines constructed after that date were to be common carriers—that is, they would be required to take into the pipe lines all crude oil offered for transportation by the individual producers of Indian Territory. The regulations also laying it down that at no time were the owners to transport through the said pipe lines a greater quantity of their own oil, than of the oil of individual producers.

Both the Gulf and Texas Companies went forward under the new conditions and constructed their respective trunk pipe lines to link with the Gulf of Mexico, the pioneer organisation in the Mid-Continent fields—we refer to the Prairie Oil and Gas Co.—

refrained extending its organisation, and not a single addition to its pipe line system has been made since the new regulations came into force. Its pipe lines, which form a complete network from one end of the Mid-Continent fields to the other, and which were constructed prior to the issuing of the new regulations are maintained as private lines for the handling of the company's own oil, purchased on the spot from the various producers.

It is a well-known fact that it was the intention of the Standard originally to take a prominent part in opening up communication with the Gulf of Mexico, and the fact that its pipe line organisation has, consequent upon the regulation of the Government, not laid a single pipe line extension for the past ten months, clearly shews what a great advantage in the marketing of large quantities of oil has been lost to the producers of the Mid-Continent fields. The operations of the Prairie Oil and Gas Co. must of necessity have been seriously handicapped by the new regulation which has been brought into effect, but the greatest disaster is that which has befallen the producers themselves, who now find the openings for their surplus oil by no means adequate.

The two companies who have constructed their Gulf pipe lines and acquiesced in the decision of the Department of the Interior that their lines shall be common carriers, also find themselves confronted with a most difficult problem, for charges of discrimination and violation of the department's regulations are to be brought against them, inasmuch as it is said that they have taken into their lines their own oil to the exclusion of that belonging to private individuals.

Whatever the outcome may be, a very wide field for discussion and legal argument is opened up concerning the inherent right of trading concerns to operate their own pipe lines for their own special benefit, as against the right of outside individuals to demand the use of such facilities.

Our opinions upon this subject are well known. The plain duty of every Government in whose country the production of petroleum has a commercial importance should naturally be to see that the industry has every possible facility for expansion, and if, as in the Mid-Continental fields of America, it becomes necessary to transport the crude oil some hundred of miles before it can be of any great commercial value, then the Government should itself see to the construction of a line for the benefit of any and every producer, but to compel private companies who constructed private pipe lines at great sacrifice of money and time to become common carriers is not only unreasonable but, as is already proved, very detrimental to the proper development of the whole industry. This subject is of such general importance that we intend to refer to it in our next issue.

The Russian Petroleum and Liquid Fuel Co., Ltd.—

In our last issue we referred to the brochure recently issued upon the brilliant past, the present degradation and the hopeful future of the above company. This publication, we may state, was from the pen of Mr. William Henry Burke, a prominent shareholder.

PROPOSED PETROLEUM LEGISLATION IN RUSSIA.

The *Trade and Industry Gazette* in a recent issue publishes the following details of a project prepared by the mining department to modify the provisions of the mining law affecting the petroleum industry.

According to this project, foreign subjects are to have equal rights with Russians to carry on petroleum production, but in the Maritime Province of Siberia, on the island of Sakhalin, in Turkestan, the Transcaspian Semiretchensky, Akmolinsk, Semipalatinsk, Turgai and Ural provinces, Jews, foreign subjects, foreign companies and Russian limited companies who have issued bearer shares are only permitted to engage in petroleum production by permission of the Minister of Industry and Commerce, in agreement with the Ministers of Interior and Finance and the Governor of the Province.

Respecting the condition for the prospecting and exploitation of natural gas fields, it is proposed to apply to them the same regulations as are applied to petroleum fields, and petroleum concessions are to carry with them the right of exploiting natural gas and *vice versa*.

In regard to proven petroliferous lands it is proposed to empower the Minister of Commerce and Industry to grant leases of plots of such lands by auction against the payment of a lump sum, such sum is to be object of the bidding, whilst the royalty on the production is to be fixed and unalterable. Settlement of the royalty due to the Treasury to be made up monthly at the average market price (not average exchange quotation as formerly).

Independently of the right to grant concessions against payment of a lump sum, the Minister of Commerce is to be given the right to grant concessions on certain plots on the condition that the whole of the crude oil produced on them shall be delivered to the Treasury at a certain price fixed at the auction and which price is to form the object of the auction.

In regard to non-proven petroliferous lands, among others, the following modifications are proposed:—(1) a petroleum concession is not to include the right of exploiting ozokerite; (2) the Minister of Commerce by agreement with the State Comptroller shall have the right to grant a reduction in the rental payable for the use of waters for the purposes of petroleum production before the period of 12 years prescribed by law, if such a reduction is found necessary for the development of the petroleum industry in a given district; (3) a concession for the exploitation of petroleum is to be granted only after competent persons commissioned for the purpose will have satisfied themselves that petroleum is to be found in the area to be conceded; (4) each application for a concession must be accompanied by a sum of money to pay for sending down the officers who are to delimitate the concession.

The above project will be shortly submitted by the Mining Department to the consideration of the Council of the Association of Representatives of Industry and Commerce, and also of the Council of the Baku Petroleum Association, after which the project will again be considered by the Mining Department and then directed through the proper legislative channels.

OIL AND OTHER "FINDS" IN STARUNIA.

By Mr. GEO. v. KAUFMANN.

(Director of the Oesterreichische Petroleum-Industrie-Aktien-Gesellschaft.)

It may interest you to hear something of the find that has been made in Starunia, near Solotwina, in the shape of nothing less than a "mammoth," or rather the skeleton of one. Starunia boasts of being, along with Boryslaw and Dzwiniacz, the only mine in the world where ozokerite is found in payable quantities, and in point of fact, as the future will soon shew, also the largest oil producing mine in Galicia after Boryslaw and Tustanowice. At present Starunia is only worked for ozokerite, and it was while sinking a shaft that the aforesaid skeleton was dug out in the course of operations at a depth of some 14 to 20 metres. The particular mine in which this skeleton was found has just been opened up by Messrs. Campe and Mueller, of Hamburg, and they have already received shoals of applications, so I am given to understand, from professors of universities and museums for the animal either by way of a gift or against payment. So far, the tusks, about six feet in length, have been extracted from the shaft, along with about two or three square yards of half-inch thick hide, with the hair still on it; knuckles, part of a jawbone and spine, and one of the hoofs a regular elephant's foot. I may add that all these remains are in a splendid state of preservation, especially the tusks and skin, and this is probably owing to the fact that the ground in and all around Starunia is saturated with oil and wax and natural gas. Excavations are still being made as the work in the shaft is proceeding, and no doubt by degrees the skeleton will be pieced together, and may yet adorn some Galician museum. It is said that only two of the species have been found, both embedded in ice—one in Siberia and one in Alaska.

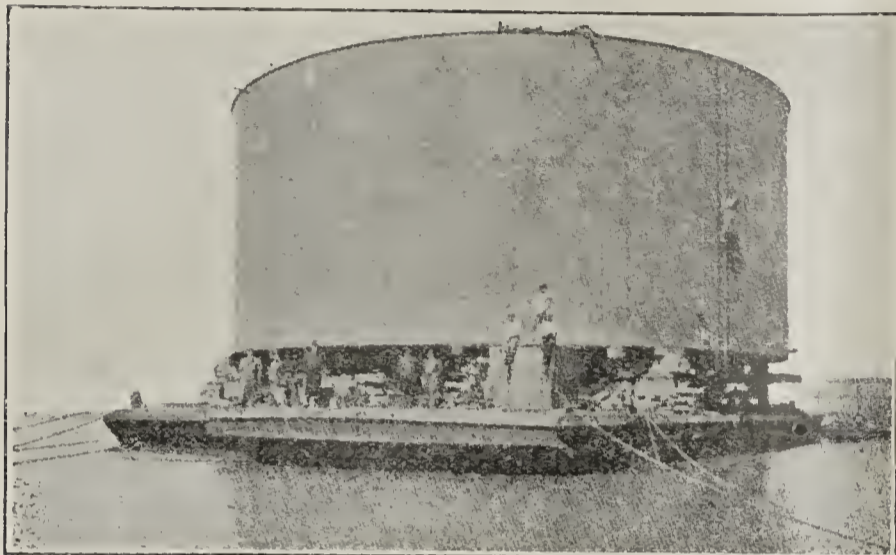
It may further interest you to know that oil has been drilled for here in Starunia by my company. At a depth of 556 metres oil was struck which in two hours spouted 200 barrels of oil and then choked up, never to be reached again, although two years' labour were spent upon the task of trying to reach the original depth. Neither the Canadian system nor waterflush succeeded in surmounting the difficulties that were met with, inasmuch as the gas whenever a certain depth had been reached would push up the sand and slime and sometimes lift the tools bodily out over the poppet head, causing nothing but fishing scrapes besides filling the bore with sand up to 200 metres from the surface.

As I have stated at the beginning of this letter, when Boryslaw and Tustanowice have done claiming investors' attention, I dare say then it will be Starunia's turn, and all geologists in Galicia, notably Prof. Dr. Zuber, are at one with me that oil will be found in as big quantities in Starunia as in Boryslaw or Tustanowice. A great deal of ozokerite has been produced here. Some years it has reached 60 cars, and since the ozokerite is an offshoot of paraffin mineral oil, enormous quantities of it must be stored up only awaiting the advent of sinker and bit to drill for it.

A NOVEL WAY OF REMOVING A LARGE OIL TANK.

During the reading of a paper recently before the members of the Pacific Coast Gas Association, a novel way in which the removal of a 30,000-barrel oil tank was carried out was explained. The tank belonged to the California Gas and Electric Corporation and it was desired to remove the structure from North Beach to a position on the Oakland estuary. Many plans were considered and abandoned, the one which was eventually agreed upon being set out below.

Holes were dug in the masonry foundation in about twenty places around the tanks to receive the jacks;



then, very carefully and evenly, the tank was raised until it was up to a point where more timbers and jacks could be got under the bottom, then the whole raised high enough to get the cribbing and large timbers in place.

The tank was then handled in the same manner as a house, taken about a mile through the streets, around one corner, and to the water's edge; and it is interesting to note that at one point, where it was taking up not only all the street but all the sidewalk as well, the tank cleared the houses on either side by only about three inches and covered their porches completely.

When all was ready in Oakland, two large barges,

about 100 feet long, were lashed together and the tank ran aboard at high tide.

The following day the voyage across the bay was commenced at 9.15 a.m., in tow of a steam tug, and by 1 o'clock the ten-mile journey across the bay and up the channel was finished, and the barges tied to the bulk-head ready to be unloaded.

CANADA'S LATEST "OIL FIELD" NOW BEING ABANDONED.

MANITOULIN ISLAND'S SAD STORY.

Operators are deserting Grand Manitoulin Island in Ontario and moving their machinery back to the States. From the time of its birth as an oil proposition to its demise was short, and its obituary is not the most pleasant reading for those who held high hopes of its proving an oil field worthy the name. Early in the year those who had invested in the territory and had paid good bonus money for part of it could scarcely wait for navigation to open so they could be able to get drilling material on the island and begin active development work, and subsequently pull down some of the bounty offered by the Canadian Government for the oil produced in its possessions. Some of the wells drilled in last year shewed oil in sufficient quantities to give the impression that they would make fine producers when given a dose of the high explosive fluid. An improvised nitro-glycerine factory was set up, and in due time the wells were given a shot, but the result was anything but what was expected. The rending of the rock seemed to do the wells more harm than good. This did not deter those from going ahead with development work, and after about 30 wells in all had been completed, and the most of them total failures, operators began to take a different view of the prospective field. At the present time not a well is drilling. An operator who returned recently from the Island stated that there was but one well drilling when he left, and no new work starting. The Island, so far as being a producer of oil, he stated, is dead. The majority of the drilling rigs will be removed to the Illinois field, where they will be used in development work.

GULF REFINING CO.,

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SUPERIOR LUBRICATING OILS OF HIGH VISCOSITY AND LOW COLD TEST.

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THE CHEMISTRY OF CALIFORNIA PETROLEUM.

A CHAPTER PUBLISHED BY THE CALIFORNIA STATE MINING BUREAU IN ITS BOOK UPON THE
"PRODUCTION AND USE OF PETROLEUM IN CALIFORNIA."

It is very evident, from a good many considerations, that the hydrocarbons making up the body of California petroleum are radically different from those of the oils of the Eastern States. The low flash point and boiling point in relation to the specific gravity, the practical or entire absence of solid paraffins, the presence of asphalt in most of our oils, and its ready formation on heating oils from which it has been removed, or in which it was originally absent, the rapid fall in viscosity of the heavier oils with rising temperature, and the strong tendency of most of our oils to oxidation, all point to the probability that the composition of our oil is quite distinct from that of Eastern petroleum.

The petroleum of the Eastern States is known to consist almost entirely of paraffins in the lighter members, and of paraffins and olefins in the heavier portions. The petroleum of the Caucasus are stated to consist principally of the naphthene group, while some German petroleum are stated to contain notable proportions of hydrocarbons of the benzene series. Various observers have found in California petroleum all of these constituents, and as a discussion of this very abstract question would be out of place here, reference is given to the original papers for justification of the statement that most California petroleum, or rather their distillation products, contain hydrocarbons of all the following series:—paraffins, olefins, probably acetylenes and other highly unsaturated compounds, naphthenes (cycloparaffins), and aromatic (benzene) compounds.

A very few of the local oils give a light distillate which appears, from its specific gravity and other physical properties, to consist largely of paraffins, but the major part of our oils give a light distillate which is much heavier than a mixture of paraffins of corresponding boiling point could be. By acting on these gasolines and kerosenes, the olefins may be removed, and as sulphuric acid used in excess absorbs but a very small proportion, it may be assumed that the olefins are not present in large quantity. After rigorous treatment with sulphuric acid, a varying but large proportion of the oil is acted on by nitric acid, forming a stable nitro-compound, and leaving a residue which cannot be further affected. This residue is very much lighter than the original oil, and from its resistance to all reagents probably consists of pure paraffins. The portion removed by nitric acid may be either benzines or naphthenes, or both. It is probable that the latter is the case, though the percentage of benzines must usually be quite small, as the gravity of benzene proper (C_6H_6) is about $28^\circ B.$, and the boiling point 80°deg. , while the gravity of local petroleum distillate boiling at this temperature is well above $70^\circ B.$ It is apparent that if the distillate consisted of benzene and paraffins alone, the gravity of benzene being 0.885, and of a mixture of hexane and heptane, boiling at 80°deg. , being 0.766, the greatest

possible proportion of benzene in a mixture of 0.700 (70°deg.) gravity would be 16 per cent.

There is no reason for supposing that the small proportion (if any) of aromatic compounds in California petroleum will ever repay the cost of separation, particularly as these substances are now very low in price, and readily obtainable otherwise. But the presence of the naphthenes very seriously affects the quality of some of the products of our petroleum, notably the kerosenes.

It has been pretty well proven by experience that a kerosene, to be rated first quality, must consist practically of paraffins, as these bodies are the most stable of the hydrocarbons, and contain the largest proportion of hydrogen. It is necessary that the hydrocarbons should be stable, that is, not subject to oxidation or to spontaneous decomposition, as otherwise the kerosene will, on standing, lose its white color, acquire a foul odor, and be otherwise deteriorated. Also, the higher the percentage of hydrogen in the kerosene, the smaller will be the proportion of air required for complete combustion, and the less the tendency to smoking when burned. The olefins, which come next to the paraffins, contain more carbon and less hydrogen, and are more unstable. Consequently, kerosene, like the oils produced by cracking paraffin petroleum, which consist largely of olefins, is of distinctly inferior quality. The naphthenes contain a still larger percentage of carbon and a smaller percentage of hydrogen than the olefins, but are more stable, consequently a kerosene constituted (like that produced locally) largely of these bodies, will have more tendency to burn with a yellow or smoky flame than either of the foregoing, but will be somewhat more stable, when purified, than a kerosene produced by cracking.

The cracking of paraffins produces lighter paraffins and olefins, the cracking of olefins produces olefins and also acetylenes or other highly unsaturated and very unstable bodies, while neither the naphthenes nor the benzines are susceptible to cracking, under ordinary conditions. For this reason, the attempt to improve matters with our oils by cracking has merely exaggerated the evil, destroying the best instead of the worst elements of the oil, and producing large quantities of very unstable bodies which have to be completely removed by the chemical treatment. It seems altogether probable that the bad qualities found in California kerosene are inherent in the nature of the oil, and cannot be removed by any possible treatment or manipulation.

The distillates heavier than kerosene appear to have the same general constitution, though the olefins are more in evidence. The rough separation, by means of acid solvents, of a number of samples of heavy distillate from Kern River oil (gravity 25° to $27^\circ B.$) indicates the following approximate constitution:—

	Per cent.
Olefins	30 to 40
Benzines, or naphthenes, or both	40 to 50
Paraffins	15 to 25

These figures are very rough, but they are sufficiently

reliable to expose the fallacy of attempts to convert heavy crude, or the heavy distillate from our lighter oils, into light products such as gasoline and kerosene. The decomposition by heat, on which all such processes must depend, converts the olefins into very unstable and foul-smelling bodies, while the benzines and naphthenes are practically unaffected, and only the paraffins are changed to advantage. As the paraffins in the heavy distillates are but a small part of the whole, and as even on these there is considerable loss in the treatment, such methods would be entirely impracticable, even aside from the very high cost of the decomposition itself, and of the subsequent chemical treatment necessary to remove the impurities produced from the olefins. Attempts to convert these heavy oils into marketable light products are based on what appears to be entire ignorance of the principles involved, and are foredoomed to failure.

As an illustration of the small yield of even apparently valuable products, take the case of a sample of distillate from 15 deg. crude oil. This sample was an average of the entire run of distillate from a batch of "D" asphalt, and had the gravity of 25.6° B. The crude oil would have yielded practically no distillate below 270° C., and whatever is found in the distillate, boiling below this temperature, may be considered as the results of cracking.

This sample, on redistillation, yielded practically nothing below 150° C. (the upper limit for the gasolines) and 37 per cent. between 150 deg. and 270 deg., this distillate having the gravity 35 deg. On redistilling this fraction for the production of kerosene, the quantity was reduced from 37 per cent. to 17 per cent. of the bulk distillate. The kerosene thus made was of a dark brown color and had a frightful odor. On treatment with small doses of ordinary sulphuric acid until the odor was removed and a permanent white color obtained, the 17 per cent. was reduced to 12 per cent., the difference being absorbed by the acid, while the amount of acid used was about three times the bulk of the white kerosene finally produced. The losses due to conversion of oil into gas during the first distillation amounted to about 2 per cent. In short, the total reduction (loss) in the bulk of oil, in decomposing and chemical treatment, was 7 per cent. in producing 12 per cent. of kerosene, with an expenditure of acid which alone would amount, at current wholesale rates, to about 45 cents per gallon of kerosene.

Sulphur and nitrogen are the only bodies found in California petroleum, aside from asphalt, which do not appear to be essential to the make-up of the oil proper. They are found in almost if not quite all of the petroleum of this State.

The percentage of sulphur is usually quite small, and the mode of its occurrence does not seem to have been determined with certainty. From some crude oils it is given off during the early stages of the distillation as sulphuretted hydrogen, or where much water is present, even as free sulphur. The heavier oils usually pass some of the sulphur into the heavier distillates, where it forms some stable combination, which may be redistilled without decomposition. This element is not detrimental to the quality of products, as is the sulphur in some of the Eastern oils, as it is removed very readily during the treatment with sulphuric acid.

(To be concluded.)

AMERICAN NOTES

Another Record.—It is reported that a gas well on the property of the Higgins Oil and Fuel Co., at Petrolia, Indian Territory, has a capacity of 20,000,000 cubic feet per day.

An Old Company under Another Name.—The Associated Producers' Co. operating in the Mid-Continent fields has been re-incorporated under the name of the Okla Oil Co. The company retains its old officers.

More Refinery Suggestions.—A charter has been granted at Guthrie to the Bartlesville Oil Refining Co., a concern which is to build a refinery at Bartlesville, and own branches at Port Arthur, in order to engage in the export business.

Activity at Jennings.—Latest reports from Jennings record great activity in the field during September, the production for that month having been almost 500,000 barrels, or over 20,000 barrels in excess of the August production.

Railway Employes Organise Crude Oil Company.—The employes of the Sante Fe Railroad have recently organised the Midway Crude Oil Co which is to develop 160 acres of proven oil territory in the Kern river field of California.

The Gulf Company's Pipe Line.—This, the first trunk pipe line to the Gulf of Mexico, is now pumping oil through its entire distance—452 miles. South of Sour Lake the oil passes through the company's old pipe line system to Port Arthur.

Dr. David T. Day, for many years Chief of the Division of Mineral Resources of the United States Geological Survey, has, at his own request, been relieved of the duties of that office in order that he may devote his time to the Survey's petroleum investigations.

The Glenn Pool.—During September it is estimated that there were 796 producing wells in the Glenn pool, their average daily production being placed at 126 barrels. The estimated daily production for the month therefore will be seen to have been in the neighbourhood of 100,000 barrels.

Near Corsicana.—It is reported that the developments near Corsicana have led to the discovery of a very light oil stratum, and from this several wells are now producing sufficient oil as to have rendered it advisable to lay a pipe line to connect with the Corsicana Refining Co.

The Utah Field.—In spite of great hindrances to progress, for the Utah field is 75 miles from any railway, which makes the transport of machinery extremely costly, a rush of operators to the Utah field is shortly expected. It is contemplated to lay a new railroad which will pass close to the field.

Activity.—Writing from Pittsburg, our own correspondent says that at the present time there is more light territory under development in the lower South-west fields than has ever been the case before. Operators are drilling eagerly for wells producing five barrels daily, but often the well yields even less than this modest figure.

Developments in Ohio.—The new developments in the Tiffin field, in Seneca county, have caused considerable activity, and many operators have invaded the territory and acquired land in likely spots. Thus the Sandusky field will be more systematically tested than ever before, for only a few wells have so far been drilled, and these were during the early days of the oil boom.

To Develop East Napa.—As the result of the discovery of oil and gas in East Napa, California, much prospecting work is to be carried out by the Newman Mining and Prospecting Co., which was recently incorporated in Napa. The first well is to be drilled to a depth of 2,000 feet, at which depth the promoters are confident they will strike a wonderful flow of oil.

Asphalt in Indian Territory.—Mr. C. N. Gould, geologist of the State University of Oklahoma, has investigated the asphalt resources of this territory, and announces that considerable quantities are found in the Chickasaw Nation and other parts of the Territory. No exploitation is as yet under way. The asphalt is said to be exceptionally suitable for street paving.

The Russian Petroleum Industry a Quarter of a Century Ago.

A LUCID ARTICLE DEALING WITH THE EARLY STRUGGLES
OF PRODUCTION AND REFINING.

By
Dr. DVORKOVITZ,
Published
twenty-two years ago
in the
"Russkia Viedomosti."

(Concluded from page 212.)

In October, 1875, Prof. Mendeleeff submitted to the Minister of Finance a memorandum upon "the necessity for abolishing the excise duty on petroleum illuminating oils called kerosene or photoneftil."

As was the case nine years previously, the arguments of this scientist were received with attention, and from the 1st of September, 1877, the excise duty on kerosene was abolished. With the removal of the excise duty, the refining industry at Baku greatly developed, and seemed to get upon a firm footing. New refineries began to spring up daily. The rapidity with which the output of kerosene grew at that time may be judged from the fact that, according to the data published by the third district office of the Transcaucasian Revenues Administration, in August, 1877, *i.e.*, on the eve of the abolition of the excise duty, there were 116 refineries working and the output of kerosene during the year amounted to 4,500,000 poods. In the following year there were already in operation 195 refineries, and the output amounted to over 6,000,000 poods. But, having no ready sale, the unexpected appearance on the market of such a large quantity of goods was beyond a doubt bound to bring about a crisis. The Baku people, however, were not daunted, and continued to build new refineries and increase the producing capacity of the existing establishments. The consequence of such imprudent and unbusinesslike conduct of affairs was a petroleum crisis, worse than that of 1875. Then, Transcaucasia still possessed capital in reserve, but with the abolition of the excise duty all free capital was directed to Baku, to the so-called Russian California, where it was all sunk deep into the torrid sands on the shore of the Caspian Sea. And then, at the time of crises, there was revealed the lack by our industrial men even of a rudimentary knowledge of the market. To petroleum the same thing happened as to sugar. Market speculations turned the heads of all refiners, inducing them to increase their output, which did not at all correspond with the requirements of the market. The flooding of the market with kerosene compelled the Baku people to sell the kerosene below its cost to themselves, or what was practised on a very extensive scale, to sell kerosene of very poor quality and dangerous to use. Thus, before they had time to gain possession of the market, they finally discredited the quality of their product in the eyes of the consumers. But, apart from this, the Baku refiners have suffered, and are suffering, losses in consequence of the whole refining industry being placed upon a wrong basis. At the time when, thanks to the farming system or the excise, kerosene on the spot cost a rouble or more per pood, the capitalist found it profitable to spend his capital on the construction of a costly refinery.

Now, however, when the local prices of kerosene are so low, and the cost of transport has scarcely undergone any reduction, it turns out that the Baku refiner, having expended his capital on a risky business by its fire danger, cannot hope to clear not only a profit commensurate with the risk, but not even the ordinary interest obtainable on capital in Russia. It turns out that both the petroleum producers and refiners have killed their capital, labour and energy on the business, whilst the profits have been and are reaped only by the transport companies and the railways. That the refineries are only suffering losses I will prove by the following figures:—The erection of a refinery at Baku for distilling and refining 100,000 poods of kerosene, according to the calculation of a gentleman highly competent in the construction of refineries, costs 20,000 roubles. Administration, exclusive of an educated technical manager, costs 4,500 roubles per annum. The cost of the crude oil and chemicals per pood of kerosene may be taken at 15 copecs. Repair and amortisation of refinery, 5,000 roubles. According to this calculation, which comes very near reality to the refiner himself, the kerosene costs 24½ copecs per pood. Pumping into the tanks of the direct transport company and freight to Czaritzin costs 18 copecs per pood. The loss by leakage in pumping and transport is taken at 3 per cent. In this way 97 poods of kerosene delivered to Czaritzin cost the refiner 42 roubles 50 copecs. Last year when the market conditions were fairly favourable the wholesale price at Czaritzin stood at 45 copecs per pood, which works out at 41 roubles 65 copecs for 97 poods—in other words the refiner on every 100 poods of kerosene delivered by him to Czaritzin suffered a loss of 85 copecs. Those who have been carefully watching the course of the development of the petroleum industry in Russia have long ago recognised that a refining industry which rests on such irrational foundations cannot flourish, and they resolved to build refineries in the centre of the market, where there exists a demand for the manufactured product.

One of the most prominent workers of this class was Mr. Ragosine. He succeeded not only in creating a model refinery, but at the same time also created a new branch of the petroleum industry, namely, the manufacture of lubricating oils. The discovery that our crude oil, which until now was considered as of small value, owing to the small percentage of illuminating oil which it contains, yields an excellent and valuable lubricating material, again revived the spirits of the refiners. The residuals, which are left after the distillation of kerosene and which formerly, for want of use, were burnt to waste in the fields, have suddenly acquired a market value, and began to realise higher prices than the

crude oil. Baku again became the scene of great activity. "We will illuminate and lubricate the whole of Europe," became the watchword of all refiners, beginning with Nobel and ending with the smallest refiners producing some 2,000 to 3,000 poods of kerosene per annum. During 1880 sprung up three huge refineries, on which was expended as much as 3,000,000 roubles. At Baku, began at that time the so-called "lubricating oil boom," *i.e.*, the manufacture of mineral lubricating oils at a forced rate. But very soon after—this time also through ignorance of the market—a lubricating oil crisis arose at Baku, in addition to the kerosene crisis. The history of the Volga refineries is, I believe, still fresh in everybody's minds, for many suffered by it with their pockets. But nobody knows the troubles which had to be borne by those capitalists, who, tempted by the high dividends paid to the shareholders of the Volga refineries in 1880, decided to build lubricating oil refineries at Baku. Many tens of millions have been sunk into the petroleum industry, much labour and energy has been laid down at Baku, and in spite of this Transcaucasia is getting poorer every year. The petroleum producers barely manage to exist; the refiners and local inhabitants do not cease complaining of their sad condition, whilst the local workmen are in want and misery. At the same time the petroleum industry is developing not merely by the day but by the hour. The quantity of crude oil produced annually increases by several million poods, the refining industry does not lag behind the crude oil producing industry, but treats all the crude oil that the latter supplies to it. But along with the increase in the producing capacity and the extended manufacture, increase also the troubles of all persons connected with this industry.

It is only necessary to look into the accounts of the Baku Mutual Credit Society or to acquaint ourselves with the balances of the local branch of the State Bank, and we shall see that the indebtedness of the producers is increasing every year, and not decreasing. We shall see that some of the largest firms are every year contracting fresh debts, and now the petroleum trade, which at first seemed to desire to be free from Government tutelage, has already demanded, ostensibly to satisfy its most pressing needs, the construction of a railway, which has cost the Government 120,000,000 roubles, and which yields annually a deficit of 3,000,000 roubles. Requests and petitions are presented by the petroleum

producers to the Government almost daily. But in all these complaints not one of them had sufficient courage to point out their real weak spot, not one of them wanted or wants to indicate to the Government the real cause of the malady from which they are all suffering. The principal cause of the terribly abnormal condition of the Baku petroleum industry is the establishment of the refineries not in the centre of the market, but in a remote corner where the building of them costs three times as much, where technical assistance is not cheap, and, lastly, where capital is very dear. Against this great error the Baku people were warned eight years ago by Prof. Mendeleeff. He pointed out "that to endeavour to be everything—drillers, carriers and refiners—is the greatest evil of our petroleum industry. For everything there will not be enough either money, energy or ability." In regard to the Baku refineries in general, Prof. Mendeleeff said as follows:—"The main bulk of the crude oil should be sent in its crude state by pipe line or by water in tank craft to places where it is advantageous to build refineries, where the consumers are near, where the mechanical and chemical materials are manufactured extensively, where oil and all residuals can be sold advantageously, where the making and return of barrels is in practice possible and convenient. Kazan, Nijni, and even Kostroma, offer more advantage than Baku.

But these warnings were not heeded, and from that time the output of the Baku refineries has increased from 5 to 20-24 million poods of kerosene per annum.

The Baku people had to pay heavily for their inattention to this warning; now they are sitting on the shores of the Caspian Sea, and crying out for radical help. Of the measures which have been and are offered for the salvation of the perishing producers, and of their real worth, I shall speak at some future time.

IN THE ECHIGO FIELD.

The Commercial Attaché to H.M. Embassy at Tokio (Mr. E. F. Crowe) reports that the oil well in Gotsu Bay, near Nacetsu in Echigo, Japan, belonging to the Japan Petroleum Co., which began to spout last August, is now producing oil at the rate of over 7 koku (1 koku = 39.7 gallons) per hour, making an average of 160 koku per day. Trial boring was begun four years ago, but up to August the amount produced had not exceeded 5 koku a day.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO OCTOBER 21st, 1907.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Oct. 7.	From Jan. 1.	Since Oct. 7.	From Jan. 1.	Since Oct. 7.	From Jan. 1.	Since Oct. 7.	From Jan. 1.	Since Oct. 7.	From Jan. 1.	Since Oct. 7.	From Jan. 1.	Since Oct. 7.	From Jan. 1.	Since Oct. 7.	From Jan. 1.
Austria ...	—	—	—	79,580	—	67,770	—	—	—	—	—	—	—	—	—	147,350
Belgium ...	—	153,410	23,360	579,405	—	—	—	310	—	4,000	—	—	—	860	23,360	737,985
Canada ...	—	—	—	—	4,000	8,800	—	—	—	—	—	—	—	—	4,000	8,800
Dutch India.	—	—	—	—	—	—	—	—	—	19,646,210	—	—	—	—	—	19,646,210
Germany ...	14,440	1,295,175	59,900	1,206,430	—	2,000	—	—	—	80	—	—	—	4,900	74,340	2,508,585
Holland ...	—	1,070	2,740	15,150	—	—	—	—	31,240	537,420	—	—	11,860	111,830	45,840	665,470
Roumania ...	—	5,744,090	—	—	—	—	—	—	—	—	—	238,700	—	—	—	12,601,380
Russia ...	—	26,889,200	853,780	3,794,130	—	125,960	—	837,040	—	12,690	—	—	1,423,780	—	853,780	33,132,800
U.S.A. ...	6,284,290	82,594,060	1,677,600	32,777,015	—	854,660	2,166,540	41,583,100	—	4,889,440	—	5,677,570	18,390	1,782,280	10,146,820	170,158,125
Other Countries	—	950	15,170	74,085	—	4,760	—	—	—	2,500	—	40	—	117,790	15,170	200,125
	6,298,730	116,677,955	2,632,550	38,525,795	4,000	1,063,950	2,166,540	47,630,040	31,240	26,551,340	—	5,916,310	30,250	3,441,440	11,163,310	239,806,830

OPERATIONS OF ROUMANIAN REFINERIES

IN JULY.

The operations of the Roumanian petroleum refineries in July are shewn in the following figures. The quantity of crude oil treated in the refineries in July amounted to 90,951 tons. The output of various products was as under :—

	Tons.
Benzine	13,350
Illuminating oil	26,426
Lubricating oil	4,300
Residuals	43,524
Total	87,600

The quantities of various products delivered from the refineries for home consumption in July were :—

	Tons.
Benzine	59
Illuminating oil	1,957
Lubricating oil	766
Residuals	31,486
Total	34,278

The stocks of various products at the refineries on July 31st were :—

	Tons.
Benzine	25,264
Illuminating oil	64,458
Lubricating oil	17,649
Residuals	45,167
Total	152,538

The output of paraffin scale in July was 36·8 tons, the consumption 22·1 tons, whilst the stocks on July 31st were 53·8 tons.

BATOUN PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended September 29th (o.s.) :—

	Illuminating Oil.		Other Products.	
	1906.	1907.	1906.	1907.
To Europe ..	327,000	—	—	269,000
To the East ..	91,000	333,000	—	5,000
To Russian Ports.	—	2,000	1,000	1,000
From 1st Jan. to 29th Sept. :—				
To Europe ..	10,091,000	12,268,000	6,160,000	8,068,000
To the East ..	5,221,000	9,044,000	45,000	319,000
To Russian Ports	2,365,000	1,792,000	185,000	145,000

The “Nulli Secundus.”—It is interesting to learn that during the recent trip of the army airship—“Nulli Secundus”—from Aldershot to London and back to the Crystal Palace, the consumption of petrol for the whole journey was a little over six gallons. Our representative gathered this information from Colonel Capper, who is in charge of the airship.

THE EUROPEAN PETROLEUM COMPANY,

LIMITED.

THE DIRECTORS' ANNUAL REPORT.

The annual report of the directors of the European Petroleum Co., Ltd., has, together with the balance sheet for the twelve months ended April 30th (o.s.), 1907, been issued during the present week.

The report shews that the profits for the year amounted to £75,438 13s. 2d., which, after deducting a sum of £43,185 11s. 5d. for interest on debentures, etc., left a balance of £32,253 1s. 9d.

During the year the leases of two properties at Baku expired, one of which has been renewed, whilst the lease of another plot has been acquired. The Hora Concession on the shore of the Sea of Marmora, has been finally abandoned, as oil was not found in paying quantities.

The board propose that a sum of £70,000 should be added to the depreciation and renewal reserve, and after this provision has been made, there will be a debit balance on the twelve months of £37,746 18s. 3d.

The gross production of crude oil from the company's properties at Baku during the twelve months has amounted to 5,577,873 poods, which after deducting royalties amounting to 165,811 poods, leaves a net production of 5,412,062 poods. As compared with the previous year, these figures shew a small increase of 71,531 poods, but as compared with the twelve months ended 13th May, 1905, the decrease amounts to 4,830,826 poods. During the year under review, the disturbed conditions at Baku unfortunately continued, and for 10 weeks all work was entirely suspended, with consequent serious and in some cases, permanent injury to the wells. Since the close of the financial year the position has somewhat improved, and the production has shewn a slight increase.

The price of crude oil has been satisfactory, the prices realised having fluctuated between 22 and 30 copecs during the year under review.

Towards the close of the financial year there was a distinct rise in freights, and all the company's steamers are now fully employed at profitable rates.

Under the provisions of the articles of association, two of the directors—Mr. H. Pike Pease, M.P., and Mr. J. S. Barwick—retire; being eligible, they offer themselves for re-election.

DETAILS OF BAKU PRODUCTION AND BORING DURING JULY, 1907.

The following are the details of the production of crude oil at the Baku oil fields during July, as published in the latest issue of the *Nefiannoie Dielo* :—

						PRODUCTION (in poods).				Average per Well per Day.				
						By Baling.	By Spouters.	Casual.	Total.					
						Number of Wells in- Exploitation.								
Balakhany	699	6,289,526	—	1,200	6,290,726	302			
Saboontchi	646	15,935,918	—	332,785	16,268,703	854			
Ramany	207	7,728,986	—	7,981	7,736,967	1,246			
Bebe-Aibat	213	11,358,941	343,227	13,729	11,715,897	1,847			
Total in July, 1907						1,765	41,313,371	343,227	355,695	42,012,293	801
Total in June, 1907						1,744	39,004,878	507,303	397,379	39,909,560	799
Total in July, 1906						1,236	22,442,647	150,000	117,621	22,710,268	843

The total production by spouting was obtained from well No. 27, on Nobel's plot No. 27, at Bebe-Aibat, which was the only spouter in July.

GROSNY PRODUCTION DURING JULY.

According to the statistics prepared by the Grosny Petroleum Association, the production of crude oil at the Grosny oil fields in July amounted to 3,356,869 poods. The total production for the first seven months of 1907 has amounted to 22,116,612 poods, of which 2,709,910 poods were obtained from spouters. The production by spouters in July was 549,000 poods against 161,000 poods in June.

The production in July of the firms operating in Grosny was:—

	Poods.
Akhverdoff Co.	1,515,300
Spies Petroleum Co., Ltd.	643,075
Anglo-Russian Maximoff Co., Ltd.	580,900
Kasbeck Syndicate, Ltd... .. .	165,220
Tcheleken-Daghestan Co.	142,620
North Caucasian Oilfields, Ltd.	112,900
Russian Standard.. .. .	91,804
James MacGarvey	Nil.
Moscow Co.	30,500
Caspian and Black Sea Society.. .. .	24,900
St. Petersburg	23,050
Kholodovsky	1,500

The total number of boreholes at the Grosny oil fields on the 1st August (o.s.) was 271, of which 161 were producing, 32 in drilling or deepening, 7 in trial baling, 12 undergoing repairs and 37 inactive.

The production was carried on on 36 plots, from 179 boreholes, whilst drilling was proceeding on 30 plots, in 41 boreholes. The amount of drilling done during the month was 5,273 feet. The largest amount of drilling work was done by the Spies Petroleum Co., Ltd., namely, 2,192½ feet, and the Akhverdoff Co., 1,391 feet.

The quantity of crude oil burnt as fuel at the wells in July was 528,170 poods, which is 85,689 poods more than in June.

GERMAN PETROLEUM IMPORTS DURING AUGUST.

The following were the imports of various petroleum products into Germany in August:—

	August. Tons.	Jan.-Aug. Tons.
Illuminating oil	49,975	597,495
Lubricating oil	15,817	144,934
Crude benzine	9,547	72,464
Refined benzine	552	4,654
Gas oil	918	5,987
Crude oil	1,656	14,460
Residuals	17	498
Patent turpentine and other mixtures	68	681
Total	78,550	841,173

The imports from the various countries were as under:—

	August. Tons.	Jan.-Aug. Tons.
United States	45,868	482,639
Russia	9,881	109,065
Austria-Hungary	7,845	74,903
Dutch-India	6,617	50,103
Roumania	4,984	27,355
Other Countries, or of unknown origin	3,355	97,108
Total	78,550	841,173

The imports from Russia in August included 6,550 tons of lubricating oils and 3,022 tons of illuminating oils. The imports from the United States consisted of 37,248 tons illuminating oil, 7,214 tons lubricating oil,

and 1,327 tons crude oil. Austria-Hungary imported 5,093 tons illuminating oil, 1,419 tons lubricating oils, and 918 tons gas oil; the imports from Dutch-India consisted exclusively of benzine, whilst those from Roumania were half illuminating oil and half benzine.

The exports of various products from Germany in August were:—

	August. Tons.	Jan.-Aug. Tons.
Lubricating oils	863	6,761
Residuals	103	1,219
Illuminating oil	130	435
Refined benzine	648	2,681
Other products	17	58
Total	1,761	11,154

Of the lubricating oil exported from Germany on the first eight months of 1907, 1,382 tons went to England and 972 to Holland; whilst small quantities went to Belgium, France, Norway and Sweden.

GALICIAN PRODUCTION IN AUGUST.

The following are the official figures of the production of crude oil in Galicia in August and the stocks at the end of that month:—

	Production in Aug. Tons.	Stocks on Aug. 31st. Tons.
West Galicia—		
Potok	1,160	2,140
Rogi	800	704
Rowne	200	372
Tarnawa-Wielopole-Zagorz	1,350	4,746
Krośno	2,600	11,509
Other West Galician Fields	1,900	5,089
East Galician Fields—		
Boryslaw-Tustanowice	114,820	493,619
Schodnica	3,350	8,594
Urycz	1,090	3,989
Mraznica	150	463
Other East Galician Fields	1,020	1,276
Total	128,440	532,401

The deliveries of crude oil from the fields in August amounted to 81,828 tons, of which 71,892 tons were at Boryslaw-Tustanowice. The loss and fuel consumption at the oil fields in August accounted for 1,330 tons. The stocks of crude oil have during August increased by 45,000 tons, of which 42,500 tons falls to the share of Boryslaw-Tustanowice.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended October 12th, was 275,000 poods, or 4,433 tons; and for the week ended October 19th was 262,000 poods, or 4,244 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended October 13th was 167,000 poods, or 2,692 tons; and for the week ended October 20th was 247,000 poods, or 3,982 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 13th October was 141,020 poods, or 2,274 tons; and for the week ended 20th October, 137,190 poods, or 2,212 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 13th October was 143,742 poods, or 2,317 tons; and for the week ended 20th October was 132,819 poods, or 2,141 tons.

The American Oil Market.

New York, Week ended Oct. 12th.

Reports from the lower south-west fields during the week have been unusually meagre, and little of a distinguishing character has been disclosed from the advices at hand. Fourth sand operations in Wetzel and Monongalia counties, West Virginia, continue to command principal interest, and good results encountered in producers, gauging from 135 to 185 barrels a day are likely to sustain activity in these fields. The gusher on Church's Fork, Wetzel county, shews remarkable staying powers, a recent report indicating a flow of 435 barrels. A feature of late developments in the Lima fields is the strike of two wells approaching the gusher class near Tiffin, Seneca county, Ohio, the combined production exceeding 700 barrels a day. The producers are a mile apart, and the connecting strip is the scene of lively operations. The runs for the month aggregate 618,216 barrels, the heaviest total since April, while the shipments totalled 459,281 barrels. In Indiana, 157 old wells were pulled out during September. The total runs for the month were 313,656 barrels and the deliveries 748,864 barrels. Advices from Illinois indicate an active trend in operations toward the southern section, some of the work partaking of a wildcatting nature. The possibilities of the State seem as much of an enigma as ever, says the *Oil, Paint and Drug Reporter*, and the uncertainty surrounding the productions is not likely to be cleared until more adequate facilities are afforded for handling the immense output. Under favourable distributing conditions, some estimates go as far as 180,000 barrels as a daily production. During September the runs aggregated 2,347,202 barrels, a daily average of 78,307 barrels, while the deliveries reached a total of 16,899 barrels, a daily average of 563 barrels. The runs of the principal operator in the Mid-Continent field shewed a falling off during the latter part of September from the high average of the earlier period, and at the end of the month they were slightly below the daily average record of August. The shipments for the two months were almost the same. In the review of the Kentucky-Tennessee fields for September the most impressive feature is the material gain in the average new production per well, the unit being 23 barrels, against an average of 10½ barrels for August. The total runs for September aggregated 61,389 barrels against which were recorded deliveries of 5,609 barrels. Our correspondent in the Gulf Coast fields reports the first delivery of crude from the Glenn pool of Indian Territory to one of the principal refining concerns at Port Arthur, Texas, during the week, marking the completion and operation of the line extending over 450 miles in less than eight months. During September the production of the Texas-Louisiana fields exceeded consumption by 114,000 barrels, a record that has not been equalled in two years. The availability of large quantities of Indian Territory crude continues to exert a depressing effect on the Gulf Coast market, particularly at Jennings, La. Crude in other sections remains stationary.

REFINED AND PRODUCTS.—Of principal interest in the local market was the announcement on Friday of an advance of 30 points in refined for export in barrels, cargo lots New York and Philadelphia loading, to \$8.75 for standard white and \$10.75 for winter white. The move was occasioned by the scarcity and increased cost of barrels, bulk and cases remaining unchanged. The market has been fairly active during the week, and clearances have aggregated 12,006,330 gallons, of which 7,640,000 gallons were in bulk. The total for the previous week was 9,011,040 gallons. Charters have included 105 cases for November shipment to the River Plate, 180,000 cases for October shipment to Foochow, Amoy and Swatow, 140,000 cases for November shipment to Ladang, Tjilitjap and two ports in Java, and 6,500 barrels for February-March shipment to Stockholm.

A decline of 1c. has been announced without comment in auto and varnish makers' and painters' deo-

dorised naphtha and stove gasoline, establishing them all at 15c. The reduction is believed to be due to the abatement of the demand and liberal supplies of the grades of crude from which they are refined. The highest products remain firm under light stocks. Naphtha has been in good request for export, clearances for the week aggregating 318,950 gallons.

CLOSING QUOTATIONS

CRUDE.	Week ended	
	Oct. 5.	Oct. 12.
Pennsylvania crude in bbls.	1907. \$8.20	1907. \$8.20
Pennsylvania crude in bulk	4.75	4.75
Residuum, bbls. for export	6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Oct. 12.	Oct. 12.
		1906.	1907.
Pennsylvania	1.64	1.78	
Tiona	1.74	1.78	
North Lima	0.98	0.94	
South Lima	0.93	0.89	
Indiana	0.93	0.89	
CANADIAN OIL:			
Petrolia	1.37	1.34	

REFINED—FOR EXPORT.

		Week ended	
		Oct. 12.	W. W.
Barrels, cargo per gal.	\$8.75	@10.75	
Philadelphia	8.70	@10.70	
Bulk, New York	5.00	@7.00	
Bulk, Philadelphia	4.95	@6.95	
Cases, New York	10.90	@13.90	
Cases, Philadelphia	10.85	@13.85	

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Oct. 5.	Oct. 12.
		1907.	1907.
3,000 to 10,000	10.80	11.05	
1,000 to 3,000	10.85	11.10	

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Oct. 5.	Oct. 12.
120 fire test, S.W. .. in barrels	12	12	
130 fire test, S.W.	12½	12½	
150 fire test, W.W.	13½	13½	
In bulk from tanks	10	10	
300 fire test	13½@14	13½@14	

NAPHTHA AND GASOLENE.

		Week ended	
		Oct. 5.	Oct. 12.
Naphtha, crude, car. lots, 68 @ 72 deg.	16.00	15.00	
Gasolene, 86 deg.	24.00	24.00	

PENNSYLVANIAN OIL RUNS from Oct. 2nd to Oct. 8th were:—Oct. 2nd, 175,117; Oct. 3rd, 213,815; Oct. 4th and 5th, 213,442; Oct. 6th, 184,308; Oct. 7th, 108,660; Oct. 8th, 167,890. For the month of September, 2,613,959.

THE DELIVERIES OF PENNSYLVANIA OIL from Oct. 2nd to Oct. 9th were:—Oct. 2nd, 196,135; Oct. 3rd, 182,905; Oct. 4th, 180,473; Oct. 5th and 6th, 360,172; Oct. 7th, 221,637; Oct. 8th, 158,239; Oct. 9th, 206,184. For the month of September, 5,654,718.

CLEARANCES FOR THE WEEK.

During the week ended Oct. 11th, and since Jan. 1 the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.	Year.	1906.
Refined	12,006,330	370,788,815	357,157,334	
Crude	31,450	1,470,375	232,900	
Naphtha	318,950	7,334,270	13,973,784	
Residuum	17,390	689,237	3,619,600	

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

		Gallons.
From New York, week ended Oct. 11th ..	16,039,890	
Total from New York, from Jan. 1st, 1907 ..	545,943,125	
Same period last year	477,126,014	
Increase	68,817,111	
From United States, week ended Oct. 11th ..	31,287,196	
Total from United States, since Jan. 1st, 1907 ..	980,440,021	
Same period last year	944,526,877	
Increase	35,912,144	

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The "Review" Shipping List.

OCTOBER 25, 1907.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Bilbao	Lisbon	Arr. Oct. 18	EUPLECTELA	Batoum	Bombay	Arr. Oct. 19
ALICE ISABELLE..	Philadelphia	Sables	Arr. Oct. 20	EXCELSIOR	Hamburg ..	New York ..	Arr. Oct. 20
ALEMBIC	Sydney (C.B.)	New York ..	Arr. Oct. 11	EZIO	—	—	Coasting Peru
AMERICAN	Antwerp	Kustendje ..	Off Ushant, Oct. 14	FRANCE MARIE ..	Marseilles ..	Philadelphia	P. Gibraltar, Oct. 21
APPALACHEE	Alexandria..	Kustendje ..	Arr. Oct. 19	GEESTEMUNDE ..	Tyne	Philadelphia	P. Butt of Lewis, Oct. 20
APSCHERON.....	Batoum	Barcelona ..	Arr. Oct. 20	GENESSE	Manchester	New Orleans	Arr. Oct. 15
ARAL.....	Philadelphia	Dover	P. Butt of Lewis, Oct. 21	GEORGIAN	Rouen	Philadelphia	P. Scilly, Oct. 14
ARAS.....	Kustendje ..	Manchester & Dublin	P. Sagres, Oct. 21	GOLDMOUTH	Cardiff	Malta	L. Oct. 22
ARGYLL	—	—	Coasting U.S. (Pacific)	GUTHEIL	Stettin.....	Hamburg ..	Arr. Oct. 10
ASHTABULA	Shanghai ..	San Francisco	Arr. Oct. 20	HAINAUT	Smyrna	Antwerp	P. Sagres, Oct. 20
ASTRAKHAN.....	Hamburg ..	Philadelphia	P. Butt of Lewis, Oct. 16	HARRY	London	New Orleans	L. Portland, Oct. 13
ATLAS	—	—	Coasting U.S. (Pacific)	WADSWORTH ..	—	—	—
AUGUSTA	Havana	Boston	Arr. Oct. 14	HELIOS.....	Tyne	Philadelphia	L. Oct. 23
AUGUST KORFF..	Philadelphia	Manchester..	Arr. Oct. 22	HERMIONE	Tyne	Antwerp	Arr. Oct. 8
AUREOLE	Sunderland ..	New York ..	P. Del. Break., Oct. 17	(Now "Soyo Maru")	—	—	—
AZOV.....	—	—	Trading on W.C. of South Amca.	HOTHAM	Calais	Philadelphia	Arr. Oct. 21
BAKU STANDARD	Kustendje ..	Alexandria..	Arr. Oct. 23	NEWTON	& Swansea	—	—
BALAKANI	Cardiff.....	Port Arthur	L. Oct. 16	HOUSATONIC	Kustendje ..	Bombay	P. Aden, Sept. 27
BATOUM	Singapore ..	Aomori	L. Kawasaki Spit, Oct. 10	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BAYONNE	Batoum	Messina	L. Constant'ple, Oct. 17	JOANNIS COUTZIS	Batoum	Rouen.....	L. Constant'ple, Oct. 20
BEACON LIGHT ..	Hamburg ..	Newport	P. Lundy Island, Oct. 23	J. B. AUG. KESSLER	Singapore ..	Rotterdam ..	Arr. Oct. 20
BEME	Rangoon	Bombay	L. Oct. 10	JAMES BRAND	Kustendje ..	London	L. Oct. 19
BLOOMFIELD	Tyne	Batoum	L. Constant'ple, Oct. 13	JULES HENRI	Marseilles ..	Philadelphia	P. Tarifa, Sept. 6
BORJOM	Alexandria ..	Batoum	At Constant'ple, Sept. 14	KURA	Kustendje ..	London and Hull	P. Constant'ple, Oct. 17
BRILLIANT	New York ..	Hamburg ..	Arr. Oct. 19	LA CAMPINE.....	Philadelphia	Antwerp	Arr. Oct. 20
BROADMAYNE	Cardiff	Philadelphia	Arr. Oct. 12	LA FLANDRE	Antwerp	New York ..	Arr. Oct. 18
BULLMOUTH	Balekappan	Hankow	L. Shanghai, Oct. 16	LA HESBAYE.....	Philadelphia	Antwerp	P. Del. Break, Oct. 12
BULYSESSES	Singapore ..	New York ..	L. Algiers, Oct. 5	LA MADELEINE ..	Algiers	Brest	Arr. June 15
BURGERMEISTER	Philadelphia	Oxelosund	P. Del. Break., Oct. 13	LA VIGUESA	Philadelphia	Corunna....	P. Del. Break., Oct. 1
PETERSEN	—	—	—	LACKAWANNA....	Philadelphia	Liverpool ..	P. Del. Break., Oct. 14
CALCUTTA.....	Shanghai ..	San Francisco	Arr. Oct. 19	LANSING.....	—	—	At San Francisco, Oct. 9
CAPTAIN A. F.	Sabine Pass	London	L. Newport News, Oct. 7	LE COQ.....	Havre	Philadelphia	Arr. Oct. 15
LUCAS	—	—	—	LOUTSCH	Batoum	Odessa	L. Aug. 14
CARDIUM	Samboe	Singapore ..	Arr. about Oct. 22	LUCERNA	Philadelphia	New York ..	Arr. Oct. 21
CATANIA	Gaviota	San Francisco	Arr. Oct. 5	LUCILINE	Cardiff	Philadelphia	P. Fastnet, Oct. 13
CAUCASIAN	Philadelphia	London	P. Del. Break., Oct. 10	LUMEN.....	Bouc	Algiers and Kustendje	L. Oct. 18
CHARLOIS	Rotterdam ..	New York ..	P. Lizard, Oct. 21	LUX	Alicant	Seville.....	Arr. Oct. 21
CHESAPEAKE	Philadelphia	Calcutta	P. Perim, Oct. 1	MANHATTAN	Batoum	New York ..	P. Tarifa, Oct. 16
CHESTER	Antwerp	Philadelphia	Arr. Oct. 11	MANNHEIM	Philadelphia	Hamburg ..	L. Oct. 17
CIRCASIAN	Talara.....	Callao	P. Payta, Sept. 8	MARGARETHA ..	Rio Grande	Buenos Ayres	Arr. Sept. 10
PRINCE	—	—	—	MAVERICK.....	San Francisco	Portland (O.)	L. Oct. 7
CLAM	Balekappan	Colombo....	Arr. Oct. 2	METEOR	Hamburg ..	Batoum	P. Constant'ple, Oct. 16
COL. E. L. DRAKE	San Francisco	San Pedro ..	L. Oct. 8	MEXICAN PRINCE	Barry	Constant'ple	P. Sagres, Oct. 22
COWRIE	Bordeaux ..	Cardiff	Arr. Oct. 7	MIRA	Port Talbot	Philadelphia	Sp. Oct. 14, 51 N., 11 W.
CUYAHOGA	New York ..	Flushing....	L. Oct. 10	MUREX.....	Hankow	Shanghai ..	Arr. Sept. 15
CYMBELINE	Newport	Philadelphia	Arr. Oct. 16	NARRAGANSETT..	London	New York ..	In Downs, Oct. 18
CZAR NICOLAI II.	Hamburg ..	Batoum	Off the Wight, Oct. 22	NERITE	—	—	Tr. in China Seas
DAGHESTAN.....	Batoum	Antwerp	Arr. Oct. 20	NEW YORK	Southampton	New York ..	Off Lizard, Oct. 20
DAKOTAH	San Francisco	China	L. Sept. 7	OCEAN	Antwerp	Philadelphia	P. Scilly, Oct. 13
DELAWARE	Barrow	Sabine	P. O. Hd. Kinsale Oct. 17	OILFIELD	Tyne	Philadelphia	Arr. Oct. 14
DEUTSCHLAND ..	New York ..	Copenhagen	L. Oct. 7	ORANJE PRINCE..	Tyne	Havana	L. Sept. 26
DIAMANT	New York ..	Stettin.....	L. Oct. 20	ORIFLAMME	Philadelphia	Cette	Arr. Oct. 23
EDWARD	Hamburg ..	Christiana ..	Arr. Oct. 6	OSCEOLA	Bluefields ..	Boston.....	L. Oct. 19
DAWSON	—	—	—	OTTAWA	Tyne	Baltimore ..	Arr. Oct. 20
ELAX.....	Cardiff.....	Philadelphia	Arr. Oct. 16	OURAL	Batoum	Antwerp....	P. Sagres, Oct. 18
ELISE MARIE	New York ..	Amsterdam..	P. Scilly, Oct. 20	PALEMBANG	Canton	Hong Kong..	Arr. Sept. 4
ENERGIE	New York ..	Danzig	L. Oct. 19	PAULA	New York ..	Konigsberg	P. Dunnet Head, Oct. 20
ERIVAN	Batoum	Hamburg ..	P. Sagres, Oct. 20	PECTAN	Port Arthur (Texas)	London	Arr. Oct. 6
ETELKA	London	Philadelphia	P. Lizard, Oct. 23				

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PENNOIL.....	Tyne	Philadelphia	Arr. Oct. 19	SPONDILUS	Aroe Bay ..	Singapore ..	Arr. Oct. 22
PERLAK	Calcutta ...	Aroe Bay ..	L. Sept. 22	STANDARD	Gothenburg	Philadelphia	L. Tyne, Oct. 12
PHOEBUS	New York ..	Hamburg ..	L. Oct. 12	STROMBUS	Cardiff.....	Aroe Bay ..	L. Port Said, Oct. 6
PINNA	San Francisco	Japan	Arr. Oct. 17	SURAM.....	London and Port Talbot	New York ..	Arr. Oct. 17
POTOMAC	London	Philadelphia	Arr. Oct. 16	SUWANEE	Manchester	Philadelphia	P. O. Hd. Kinsale Oct. 13
PROMETHEUS....	New York ..	Rotterdam..	P. Scilly, Oct. 22	SVIET	Batoum	Kherson	L. Oct. 1
PRUDENTIA	Singapore ..	Swatow	Arr. Sept. 7	TELENA	Rangoon....	Europe	L. Port Said, Oct. 18
QUEVILLY.....	Philadelphia	Rouen.....	P. Del. Break, Oct. 9	TEREK.....	Philadelphia	Hamburg ..	Arr. Oct. 21
RION.....	Philadelphia	Belfast	P. Del. Break, Oct. 13	TIFLIS	Batoum	Antwerp....	L. Oct. 22
ROCK LIGHT	Rotterdam..	Ibrail	L. Constant'ple, Oct. 22	TIOGA	Galveston ..	Dover	L. Newport News Oct. 14
ROMANY.....	Singapore ..	Channel	P. Tarifa, Oct. 21	TONAWANDA	San Francisco	Hankow	L. Sept. 12
ROSSIJA	Archangel ..	London	L. Oct. 12	TROCAS	Hankow	Balekappan	L. Oct. 19
ROTTERDAM	Calcutta	Boston & New York	L. Oct. 22	TURBO.....	Port Arthur (Texas)	Hamburg ..	L. Oct. 16
RUSSIAN PRINCE	Philadelphia	Tampico	P. Del. Break, Sept. 27	TUSCARORA	New York ..	Avonmouth..	Arr. Oct. 18 and Sd. Oct. 22
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	TWINGONE	Rangoon ..	Madras	L. Oct. 23
SAN CRISTOBAL..	Philadelphia	Dunkirk	P. Del. Break, Oct. 10	VEDRA.....	Singapore ..	Yokohama ..	L. Kobe, Oct. 23
SAN IGNACIO DE LOYOLA	Philadelphia	Gijon	P. Del. Break, Sept. 16	VILLE DE DIEPPE	Passage West	Philadelphia	Sp. Sept. 24, 50 N. 15 W.
SAXOLEINE	Philadelphia	Cette	P. Del. Break, Oct. 9	VOLUTE	Balekappan	Shanghai ..	L. Oct. 14
SEMINOLE.....	Calcutta	San Francisco	Arr. Oct. 11	WASHINGTON....	Kustendje ..	Antwerp....	Arr. Oct. 19
SINGU	—	—	Tr. in East Indies	WEEHAWKEN....	London	Philadelphia	P. Prawle, Oct. 12
SNOWFLAKE.....	Philadelphia	London	P. Lizard, Oct. 22	WILLKOMMEN....	Philadelphia	Gothenburg	L. Oct. 18
				WINNEBAGO	San Francisco	Canton	L. Oct. 5

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

October 25th, 1907.

The price of Petroleum has risen since our last report, and is now quoted as follows:—Russian and Roumanian, 6½d.; American, 7½d.; Water White, 8½d.

LUBRICATING OILS

are unaltered as follows:—

American pale, £7 7s. 6d. to £11.
American dark cylinder, from £8 10s.
American filtered cylinder, from £11 2s. 6d.
Shellene, £5. No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine has been having its ups and downs, varying but very little, the latest quotations are for Spot, 38s. 9d.; November-December, 39s. 6d.; and for the first four months of next year, 40s. 3d.

LIVERPOOL OIL MARKET.

October 24th.

Refined oils are quiet, and sellers quote 6¾d. for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0½d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, October 24th.

Refined, in cases, is steady at 10'90; Standard White, 8'75; Credit balances, 1'78c.

PHILADELPHIA, October 24th.

Standard White is still quoted at 8'70.

RUSSIA.

BAKU, October 22nd.

The Baku oil market is firm. Light crude oil, spot, 25½-26½ copecs per pood; residuals, in ships, 28-28½ copecs.

BELGIUM.

ANTWERP, October 18th.

The petroleum market is firm. Price of Standard White, spot, 22½ francs per 100 kilos.

FRANCE.

PARIS, October 18th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34'25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, October 18th.

The kerosene market is firm. The price of American Standard White is 7'50 marks per 50 kilos.

ROUMANIA.

October 18th.

Crude oil from different fields, including	Frans.
pipe line charges, per 100 kgs. ...	4'00-4'05
Refined oil, exclusive of taxes ...	8'00- —
Motor benzine, including taxes ...	23'00-24'00
Benzine, doubly refined ...	25'00-26'00
Residuals in tank waggons, at refinery ...	3'60-3'80
Paraffin ...	120'00-125'00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	6'50- —
Benzine, sp. gr. 0'710-0'715 ...	21'00-22'00
" sp. gr. 0'715-0'720 ...	19'00-20'00
" sp. gr. 0'730-0'740 ...	14'00-15'00
" sp. gr. 0'745-0'755 ...	10'00-11'00

INDIA.

BOMBAY, October 5th.

Market still strong.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. ..	Rs. 6 4 2
" Chester, 125 deg. ..	4 12 2
" Monkey Brand, 125 deg. ..	4 4 2
" Bulk, 125 deg. (in local made tins) ..	3 12 6
" 125 deg. (8 Imperial gallons) ..	3 2 6
" "White Camelia" brand, 125 deg. ..	No stock.

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair ..	3 8 0
Sumatra "Rising Sun," bulk, per unit ..	3 3 0
" " " tins, per pair ..	3 13 0
Silverlight cases, per case ..	5 4 0
Sumatra, "Anchor" per case ..	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

*Specially prepared for .
this Journal by . . .
the Custom House. .*

FOR THE WEEK ENDED 14TH OCTOBER, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
Oct. LONDON—				
8	Fielder, Hickman and Co...	Lub.	50,060	New York
8	Scott's Wharf	"	2,000	"
9	Mordaunt Bros.	"	90	"
9	Anglo-American Oil Co. ..	"	19,000	"
10	G. and H. Green	L.Comp	4,410	"
10	T. H. Lee	Lub.Gr.	110	Hamburg
10	London and India Docks Co.	Lub.	800	"
10	Page, Son and East.. ..	"	1,880	Antwerp
11	A. Duckham and Co.	"	2,800	Baltimore
11	Lubricating & Fuel Oils, Ltd. (Etelka)	"	847,500	Batoum
12	"	"	7,500	Marseilles
12	C. Price and Co.	"	4,040	Philadel.
12	Mordaunt Bros.	"	6,700	"
12	Anglo-American Oil Co. ..	"	423,380	New York
	(Narragansett)			
12	"	Gas	348,930	"
12	"	Lamp	2,194,940	"
12	Argo Steamship Co.	Lub.	90	Bremen
14	London and India Docks Co.	"	4,100	Hamburg
14	T. H. Lee	"	640	"
14	Page, Son and East	"	560	Antwerp
14	Scott's Wharf	"	1,280	New York
14	Mordaunt Bros.	"	13,000	"
14	G. W. Sheldon and Co. ..	L.Comp.	970	"
14	John Cockerill Line.. ..	Lub.	80	Ostend
LIVERPOOL—				
8	Thompson, McKay and Co.	"	90	Hamburg
8	W. H. Knott and Co.	"	420	New York
8	Burnaby and Chantrell ..	"	870	"
8	E. H. Kellogg and Co. ..	"	2,000	"
8	Geo. B. Taylor	"	36,360	"
8	J. Light and Son	"	1,000	"
9	J. T. Fletcher and Co. ..	"	200	Antwerp
10	Worthington and Boler ..	"	400	Philadel.
10	W. B. Dick and Co.	"	5,080	"
11	Meade-King, Robinson & Co.	"	59,200	"
11	Midland Railway	"	850	"
11	Crew, Levick and Co.	"	10,290	"
11	Pickford's, Ltd.	"	310	Hamburg
12	Ismay, Imrie and Co.	"	2,000	New York
14	Meade-King, Robinson & Co.	"	10,400	Hamburg
14	Valvoline Oil Co.	"	7,790	New York
GRIMSBY—				
8	J. Sutcliffe and Son.. ..	"	480	Hamburg
8	"	"	370	Antwerp
11	"	"	80	"
HULL—				
8	Meade-King, Robinson & Co.	Naphtha	26,000	Rotterdam
8	Wilsons and N.E. Railway Shipping Co.	Lub.	400	Antwerp

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Oct.				
10	Hull & Netherlands S.S. Co.	Tar Oil	6,700	Rotterdam
10	W. Gilyott and Co.	Lub.	101,960	New York
10	Wilsons and N.E. Railway Shipping Co.	"	4,200	"
14	"	"	2,480	"
14	"	"	80	Riga
14	"	"	3,280	"
14	"	"	2,000	Antwerp
MANCHESTER—				
10	J. T. Fletcher and Co. ..	"	490	"
10	W. Hodgson and Co.	"	630	Hamburg
NEWCASTLE—				
9	P. H. Matthiessen and Co.	"	170	Bergen
10	Tyne-Tees S.S. Co.. ..	"	640	Antwerp
10	"	"	400	Hamburg
SWANSEA—				
11	Burgess and Co.	L. Paste	180	"
ABERDEEN—				
10	R. Cannon, Reid and Co. ..	Lub.	120	"
GLASGOW—				
8	Clyde Shipping Co.	Lub.Gr.	120	Antwerp
10	"	"	1,150	Antwerp
11	Anchor Line	Lub.	31,680	New York
GRANGEMOUTH—				
10	J. Currie and Co.	"	3,400	Hamburg
10	W. Graham-Yooll and Co..	Lamp	2,720	"
10	"	"	3,600	"
10	J. Currie and Co.	Lub.	5,800	"
12	Hopkins, Paton and Co. ..	"	960	Antwerp
LEITH—				
9	G. Gibson and Co.	"	2,360	"
11	"	"	120	"
11	Henderson and McIntosh ..	"	33,240	Philadel.
BELFAST—				
8	G. Heyn and Sons	"	1,200	Riga
10	J. C. Pinkerton and Co. ..	"	160	Hamburg
CORK—				
8	Palgrave, Murphy and Co...	"	120	"
Total for Week			4,309,410	
Deduct to Correct :—				
BARROW—				
23/9	Asiatic Petroleum Co. (Elax)	Benzine	24,080	Singapore
LONDON—				
3/9	Lubricating & Fuel Oils, Ltd.	Lub.	20,500	Philadel.

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SOLE IMPORTERS:—

Anglo-American Oil Co., Ltd.,

22, Billiter Street,

Telephone Nos.:—5733-7 Avenue.

LONDON, E.C.

FOR THE WEEK ENDED 21ST OCTOBER, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	No. OF GALLS.	PORT WHENCE.
Oct.	LONDON—			
15	Lubricating & Fuel Oils, Ltd.	Lub.	7,500	Marseilles
15	Anglo-American Oil Co. ..	"	17,200	New York
15	Fielder, Hickman and Co...	"	16,600	"
15	Produce Brokers	"	4,800	"
15	W. H. J. Alexander	"	2,460	"
16	London & India Docks Co...	"	5,400	"
16	Mercantile Lighterage Co...	"	1,320	"
16	Anglo-American Oil Co. ..	"	43,000	Philadel.
16	E. J. Walkenshaw	"	16,600	"
16	A. Brown and Co.	"	4,400	"
16	Ocean Oil Co.	"	2,800	"
16	T. H. Lee	"	200	Hamburg
16	Argo Steamship Co.	"	150	Bremen
17	"	"	30	"
17	Page, Son and East.. ..	"	80	Antwerp
17	F. Randall	"	10,750	Philadel.
17	G. and H. Green	"	4,610	New York
18	Mordaunt Bros.	Lamp	5,000	Hamburg
18	A. Brown and Co.	Lub.	2,000	"
18	"	Lamp	4,000	Philadel.
18	W. H. J. Alexander.. ..	Lub.	4,000	"
19	Anglo-American Oil Co.	Gas	1,614,560	Sabine
	(S.O. Co. No. 95)			
19	"	Lamp	1,405,560	"
21	Bowring Petroleum Co. ..	"	973,940	Philadel.
	(Snowflake)			
21	Alex. Duckham and Co. ..	Lub.	4,000	"
21	Page, Son and East.. ..	"	240	Antwerp
21	Burt, Boulton and Heywood	Naphtha	5,240	Terneuzen
21	London and India Docks Co.	Lub.	2,500	Hamburg
21	"	"	5,000	"
21	Schlieman's Oil Co.	"	6,200	"
	LIVERPOOL—			
15	Meade-King, Robinson & Co.	"	4,200	Philadel.
15	Stockdale and Doel	"	4,150	Boston
16	George B. Taylor	"	320	New York
16	Pickford's	"	250	Hamburg
17	Bowring Petroleum Co. ..	"	1,280	Philadel.
17	Meade-King, Robinson & Co.	"	35,120	"
17	W. B. Dick and Co.	"	20,620	"
17	Crew, Levick and Co.	"	12,740	"
17	G. B. Taylor.. ..	"	91,240	New York
18	Vacuum Oil Co.	"	19,400	"
18	"	Lub. Gr.	2,200	Rotterdam
18	Meade-King, Robinson & Co.	Lub.	1,000	Philadel.
19	"	"	5,000	"
19	Liverpool Warehousing Co..	"	3,200	"
21	W. Gibson and Sons	Lamp	2,050	Boston
21	Valvoline Oil Co.	Lub.	9,020	New York
	BRISTOL—			
15	H. Pritchard and Co.	"	2,160	New York
15	W. Smith and Co.	"	27,400	"
15	H. R. James and Sons	"	8,000	"
17	Ford and Canning	"	1,200	"
18	Canadian Pacific Railway ..	Resid.	4,000	Montreal
18	Pickfords	Lub.	280	Antwerp
18	"	"	750	Hamburg
18	E. Stock and Sons	"	2,000	"
21	Anglo-American Oil Co.	Lamp	1,701,400	New York
	(Tuscarora)			
21	"	Gas	203,050	"
	GRIMSBY—			
15	J. Sutcliffe and Son.. ..	Lub.	430	Antwerp
15	"	"	540	Rotterdam
15	"	"	180	Antwerp

DATE Oct.	PORT AND IMPORTERS	DESCRIP- TION.	No. OF GALLS.	PORT WHENCE.
	HULL—			
15	Wilsons and N.E. Railway Shipping Co.	Lub.	240	Antwerp
15	"	"	360	"
15	"	"	3,120	Hamburg
17	Hull and Neth. S.S. Co. ..	Tar oi	2,400	Rotterdam
18	"	"	2,160	"
21	Wilsons and N.E. Railway Shipping Co.	Lub.	46,240	New York
	MANCHESTER—			
15	Geo. B. Taylor	"	520	Hamburg
17	D. Currie and Co.	"	80	"
17	J. T. Fletcher and Co. ..	"	580	Antwerp
17	C. H. Morton and Sons ..	M. Colza	600	Amsterdam
17	Pickfords, Ltd.	L. Paste	320	Hamburg
18	Lamport and Holt	Lub.	1,500	New York
18	Geo. B. Taylor	"	157,840	"
18	Geo. Fairclough	"	1,980	"
18	Diamond Lubricating Co..	Lub. Gr.	2,000	"
18	Bramwell, Fern and Co. ..	Lub.	2,060	"
18	Liverpool Storage Co. ..	"	25,520	"
19	Lamport and Holt	Lub. Gr.	940	"
19	Worthington and Boler ..	Lub.	1,050	Philadel.
19	George B. Taylor	"	126,640	"
19	Crew, Levick, and Co. ..	"	14,800	"
19	"	M. Colza	2,670	"
19	Liverpool Storage Co. ..	Lamp	2,400	"
19	D. Currie and Co.	Lub.	240	Hamburg
	MIDDLESBRO'—			
15	J. J. Sutherland	"	760	Antwerp
	NEWCASTLE—			
16	Tyne-Tees Steamship Co. ..	"	200	Hamburg
17	"	"	4,600	Antwerp
19	"	"	3,400	"
	SWANSEA—			
18	Burgess and Co.	L. Paste	90	Hamburg
	ABERDEEN—			
21	R. Connon, Reid and Co. ..	Lub.	1,080	"
	DUNDEE—			
18	D. Alexander and Sons ..	"	400	"
	GLASGOW—			
15	Anchor Line	"	34,250	New York
19	J. and A. Allan	"	51,140	Philadel.
19	"	M. Colza	15,720	"
	GRANGEMOUTH—			
15	J. Currie and Co.	Lub.	40	Hamburg
15	"	"	2,640	"
15	W. Graham-Yool and Co. ..	Lamp	3,120	"
	LEITH—			
15	Geo. Gibson and Co.	Lub.	800	Antwerp
15	J. Cormack and Co.	"	1,720	Riga
15	J. Currie and Co.	"	520	Hamburg
17	"	"	3,740	"
	Total for Week		6,853,900	
	Total for the Fortnight ..		11,163,310	
	Deduct to Correct :—			
	MANCHESTER—			
16/9	Anglo-American Oil Co.	Lamp	10,000	Philadel.
	(Cuyahoga)			

Telegraphic Address:—"OLEINE."

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVII. (New Series.)

NOVEMBER 9TH, 1907.

No. 411.

Editorial Notes.

California's Increasing Export Trade. During the past few years, California's petroleum export trade has made real progress. For a long time the one cry from those interested in California's oil industry was the absence of foreign markets for the refined products; but this cry is heard no longer. The great consuming markets of the Far East offer an outlet, the like of which can scarcely be found in any other part of the world, and it is mainly due to the development of trade with these Far-Eastern ports that the export trade of California is making such remarkable headway. The State's export oil trade first assumed commercial proportions in 1904, when for the year the total exports of refined oil reached 2,000,000 gallons. The following year they were over 12,000,000 gallons, so great had been the development of the export trade, while for last year the figures stand at over 41,000,000 gallons, and represent a value of close upon \$1,700,000. The development we see here recorded bids fair to continue for a long time to come. For the first six months of this year, the refined oil exports from California have totalled over 30,000,000 gallons, and the value for this period is close upon that for the whole of 1906. These figures in themselves are sufficient to shew the headway California is now making in disposing of the products of its enormous crude oil production.

Petrol Prices again Reduced. The announcement that the Anglo-American Oil Co. has again reduced the price of the well-known brand of petrol which it imports and distributes in this country, should be a most definite answer to the cries of those pessimists who, for reasons best known to themselves, would for the past year or two have us believe that further advances, rendered necessary by a failing supply, were inevitable. During the last few weeks, petrol has on two occasions been reduced one penny per gallon in its retail price, and the reason for this is not far to seek. Stocks are accumulating in many of the American fields, while in other countries of supply, the same remark is applicable. The motorist is therefore enabled to enjoy the advantages attendant upon a perfect system of transport and distribution, and there is no doubt that—for the present at all events—the voices of many evil prophets will be silenced. As to the future, there must naturally prevail a great amount of uncertainty, but the trend of recent events, both at home and abroad, seems to suggest that there need be not the slightest fear either as to the exhaustion of supplies of this most useful fuel or the retail price at which it can be secured. It may be of interest here to remark that in more than one direction the needs of the motor industry in regard to fuel supply are claiming attention, and the near future may have a few surprises for the motorist in store.

England's Petroleum Import Trade. Some very interesting comparisons may be gathered from our classified list of petroleum imports into the United Kingdom, and placing it side by side with that of a year ago. Our total volume of petroleum trade is unmistakably increasing, and for the ten months of this year is about 8,000,000 gallons ahead of what it was at the corresponding period of 1906. The imports of benzine and gas oil account for this substantial gain, but the increases in these imports are greater than appears at first sight, for in many of the other classes of oils—illuminating, lubricating, etc.—decreases have to be made good. Of the producing countries, America is without a doubt strengthening her hold upon the British markets, her imports into the United Kingdom this year being far ahead of those for 1906. On the other hand, Russian oil is behind its last year's figures, the heavy rates which have for a long time been ruling at Batoum being responsible to a very large extent for this. Each passing month sees Dutch India and Roumania steadily advancing in their trade with this country. In the former case this year's figures are double those for the ten months of last year, while in regard to Roumania, the increase is well over fifty per cent. To-day no less than three-fourths of our motor spirit comes from the Far East, whereas a year ago the Dutch Indies supplied only one-half of our benzine imports. As we say, our specially compiled classified list of imports allows of many interesting comparisons.

The Steaua Romana and Roumanian Progress. The recent progress which has taken place in the Roumanian petroleum industry, and likewise the prosperity now being shared by the operating companies in that country, is reflected in the eminently satisfactory report of the Steaua Romana—the largest producing company in Roumania. Owing to a considerable reduction in the cost of production of the oil, and also a slight improvement in the average prices obtained for products, the operations of the company for the past year shew a gross profit of 6,614,129 francs—a sum practically double that of the previous year. The company's production of crude oil increased from 220,000 tons in 1905 to 330,000 tons last year, the quantity of crude oil treated at the refineries increased from 230,000 tons to 320,000 tons, and the sales of products increased accordingly. In regard to the market conditions, the directors' report is worthy of repetition. It states that the Roumanian home market is quite sufficient to absorb the whole of the liquid fuel output, and there is consequently no need for any effort to export this article. The exports of refined products has been asserted by the extraordinary demand throughout Europe for benzine and an increasing demand for illuminating and solar oils. For these last-mentioned products the company has entered into an agreement with the European Petroleum Union, which has proved of great assistance.

LONDON OIL SHARE MARKET.

FRIDAY, NOVEMBER 8TH, 1907.

The severe universal monetary stringency, which is most acutely felt in New York, continues to have a most adverse effect upon the Stock Markets, and we have to report three advances in the Bank of England rate of discount during the past fortnight (a most unprecedented event), from $4\frac{1}{2}$ per cent. to 7 per cent. Happily the grave apprehensions of a general railway strike have been dispelled, but the good effects which would doubtless have followed the announcement of a satisfactorily understanding has been discounted by the paralysing effect of the dear money, and the uncertainty as to what failures may still be notified. The Oil Share section, throughout the stress and storm, has remained fairly steady, although in the few instances where changes occur, they are, as might be expected, of a downward character, Baku Ordinary being exceptionally weak on the late meeting of shareholders.

The first alteration took place on the Monday following our last issue, when Russian Petroleum Ordinary and Preference both fell 1s. per share to 2s. 6d. to 3s. 6d. and 3s. 6d. to 4s. 6d. respectively. On the Wednesday, Californian Oilfields lost $\frac{1}{8}$ at $5\frac{1}{8}$ - $5\frac{3}{8}$, and the next day Shell Transport Preference were $\frac{1}{16}$ lower at $9\frac{3}{4}$ -10. Friday, November 1st, was a Stock Exchange holiday, and on Monday European First and Second Mortgage Debentures were quoted ex-dividend at 70-74 for the former, and 34-37 for the latter. Spies Petroleum shed $\frac{1}{2}$ at $\frac{9}{32}$ - $\frac{11}{32}$, and Shell Transport Ordinary fell 6d. at 41s. to 42s. On Wednesday, the 6th inst., Baku Ordinary were weak at 2s. 6d. to 3s., thus shewing a loss of 6d. per share, and Californians were also lower at $5\frac{1}{4}$, but on the other hand, Shell Transports recovered their previous loss of 6d. On Thursday, Bakus were again easier, quotations varying from 2s. 3d. to 2s. 9d. to $\frac{3}{32}$ - $\frac{5}{32}$, and Shell Transports lost their yesterday's gain, closing 41s. to 42s.

At the end-October settlement, which commenced on Monday, the 28th, rates of interest ranged a good deal higher, and shewed some little irregularity, while a comparison of making up prices with those fixed at the mid-month settlement discloses a shrinkage in the majority of cases, there being no rise whatever. Baku Preference at 5s. lose 6d., Californian Oilfields at $5\frac{3}{8}$ lose $\frac{1}{8}$, Russian Ordinary are 9d. lower at 3s., Shell Transport 1s. 6d. at $2\frac{1}{8}$, while Spies are 6d. easier at 6s. 6d., Anglo-Russian at $\frac{1}{16}$, Baku Ordinary at 3s., Russian Preference at 9s., Schibaieff Ordinary at 3s., and the Preference at $1\frac{1}{4}$ being witeout change.

OUR ESTEEMED CONFRÈRE— DR. PAUL SCHWARZ.

There are very few gentlemen who worked more as-



siduously than did Dr. Paul Schwarz, of Berlin, the proprietor of *Petroleum*, to secure the success of the recent Third International Petroleum Congress at Bucarest. As general secretary of the German Committee, he did much to arouse interest throughout Germany in the Congress, while at the Congress itself, he contributed a most

interesting paper upon German capital in the Roumanian oil fields.

CAPTAIN LUCAS AND THE RECENT PETROLEUM CONGRESS.

Captain A. F. Lucas, the well-known oil man who discovered Spindle Top, has given to the editor of the *Oil Investors' Journal* a few impressions concerning the recent International Congress at Bucarest, which he attended. During the Congress Captain Lucas was a most enthusiastic delegate, and while in Bucarest he made many new friends. Photography is one of the captain's hobbies, and upon his recent Roumanian visit he made as much use of his camera as he could well do, the illustration published below being but one of some dozens taken during Congress week. As reproduced in our contemporary the impressions of Captain Lucas are as under:—

"As you may know, I went to attend the Third International Petroleum Congress, which convened at Bucarest, Roumania, visited the principal fields, and attended the sessions in the interest of petroleum, the whole proving a grand success. In this regard I may remark that not only the Roumanian Government and its officials, but the producers and refiners, combined to make the occasion a memorable one, and they certainly succeeded in shewing at their best the resources of Roumania.



A WAYSIDE INN—AND ITS GUESTS.

The oil industry there has a great future. I found it in a very flourishing condition, when it is considered that its real history in production began only a few years ago. There is not a large number of enterprises, but those that exist employ a very large capital in the production and refining of oil. The transportation as well as the general supervision for the welfare of the fields is under the tutelage of the government. The industry is well located for the distribution of its product, and its by-products are sought by all Europe.

"I was very much disappointed to note that out of, say, 250 visiting scientists there were only two representing the United States, the largest producing country in the world. The next Congress will be held in Lemberg, Galicia, Austria. There was a disposition to expect that the United States would invite the Congress here next, but owing to the very small attendance from the United States this was not encouraged, although I think that this country should have endeavoured to obtain the next meeting, three years hence."

MESSRS. JOHN RUSSELL AND CO.'S NEW CALENDAR.

We have received a very neat and artistic calendar from Messrs. John Russell and Co., Ltd., of Walsall, which is now being forwarded to their clients, and for which, we should imagine, there will be an eager demand. It takes the form of a shield and is of a "perpetual" nature, the days, dates and months being changed as required. We might also mention here that Messrs. Russell have now in hand some very large orders for casing for many of the eastern oil fields, and having recently laid down a large American welding furnace they are now in a position to make casing and oil pipe line tubes in lengths up to 25 feet. This special length will undoubtedly be appreciated by users, owing to the smaller number of joints in laying pipe lines or putting down a string of casing. Details and prices will be gladly forwarded by making application to Messrs. Russell.

THE THIRD INTERNATIONAL PETROLEUM CONGRESS AT BUCAREST.

SECOND SECTION.—CHEMISTRY AND TECHNOLOGY.

This section of the Congress continued its sittings on September 12th, when at the morning seance Dr. Dvorkovitz read his paper upon "Distillation, Refining and Gasification of Hydrocarbons," which has already been published in the REVIEW. He described the method he employed for separating the terpenes and the apparatus used by him for the purpose. A discussion followed, Dr. Gouchman, Dr. Edeleanu, Mr. Obreja and others taking part.

Dr. Edeleanu then read Prof. Lidoff's paper on "The Quantitative Volumetric Determination of Hydrogen in Petroleum Oils."

Prof. Curt Proesdorf, in speaking upon "The Practical Experiments in Burning in Photometric Tests of Illuminating Oil," dwelt on the importance of lamps in the illuminating power of oils. He described various types of burners and cylinders which would be most suitable for Roumanian oil.

Dr. Uebbelohde read his paper on "Breakage of Oiled Parts of Machinery and the Analyses of Lubricating Oils." He came to the conclusion that the main quality to be sought in lubricating oil was viscosity.

Dr. Day, Mr. Gouchman and Prof. Zaloziecki also spoke on the same subject.

Dr. Weinstein read a paper by Dr. Kissling on "New Methods for Analysing Lubricating Oils." In this paper, owing to the difficulties encountered in determining the quality of lubricating oils by physical processes, the author proposed chemical methods. He described one such method which he found very successful.

Prof. Cronquist read a paper on "Petroleum as a Solvent and Isolating Material." He also referred to his method for determining water in petroleum.

Mr. Rakusin read a paper on "Comparison between Roumanian and Russian Petroleum."

Dr. Uebbelohde, Dr. Aisinman, Prof. Zaloziecki and Dr. Holde took part in the discussion on this paper.

The meeting then adjourned.

The following day, at the morning sitting, Prof. Pfeiffer spoke upon "Experiments for the Gasification of Roumanian, American and Russian Petroleum Oils," and Mr. Kharitchkoff and Dr. Dvorkovitz took part in the subsequent discussion.

Captain Panaitescu spoke on "The P. L. Lamp," shewing its advantages over other oil lamps and incandescent burners.

Dr. Edeleanu read the programme of the excursion to Constantza, and asked for permission to interrupt the

proceedings by reading the report of the International Commission for the unification of methods of testing petroleum products.

Prof. Holde shewed the composition and work of the committee. This committee consisted of:—Prof. Zaloziecki, Prof. Holde, Dr. Uebbelohde, Dr. Edeleanu, Dr. Weinstein, Messrs. Guiselin, Nicholas and Gouchman. Dr. Uebbelohde was nominated secretary of the commission, whilst Prof. Zaloziecki and Dr. Edeleanu edited the report, introducing some slight modifications in it.

Mr. Guiselin read the report of the French Commission, composed of Messrs. Calvé, Desvignes, Guilbert, Guiselin, Tassilly, Benoit, Giron, Pihau, Arbel, Henry, Lenoble and Maguin, and gave some explanations about the report.

Mr. Gouchman said that he had also worked on the commission, but had not had time to make some modifications which in his opinion were necessary. Outside of these modifications, he completely approved of the report of the German Commission.

Dr. Dvorkovitz said that the tests had to be made in comparison with the English tests, which were quite different.

Mr. Kharitchkoff also proposed certain changes in the report of the German Committee.

Dr. Day, welcoming the reports of the various committees on the unification of methods of testing, said that in America there is a special bureau, occupied with the making of comparative tests. It would be desirable that the International Committee should place itself in communication with the American bureau in order to discuss the question, and take a decision only after everybody had adhered to all the theories.

Dr. Uebbelohde summarised the propositions of the French and German Committees, and proposed a list of members to work on the International Committee for unification of methods of testing, taking as a basis the work already accomplished with the object of unification.

Mr. Tassilly proposed to include Mr. Desvignes in the committee representing the important French commercial group.

Dr. Day objected to this nomination, saying that if all the foreign delegates were nominated the committee would become too numerous for effective work. He considered one representative for each country sufficient.

Mr. Adler supported Dr. Day's proposal.

Mr. Gouchman proposed two representatives for each country, and suggested Mr. Kharitchkoff as the second representative for Russia.

Dr. Uebbelohde then read out the fresh list of the

members of the committee for the unification of methods of testing petroleum products, which is as follows:—Hon. president, Dr. Holde, Professor at the Polytechnic School, Berlin; office of the secretary general, Technical High School, Carlsruhe; secretary, Mr. Guiselin; Germany, Dr. L. Weinstein; America, Dr. D. T. Day; England, Sir Boverton Redwood and Dr. P. Dvorkovitz; Austria, Prof. R. Zaloziecki and Dr. L. Singer; Belgium, Mr. F. Nicholas; France, Dr. Tassilly and Mr. Desvignes; Holland, Mr. Loudon; Italy, Dr. Villavechia

and Mr. Cattaneo; Roumania, Dr. Edeleanu and Dr. Aisinman; Russia, Mr. Kharitchkoff and Mr. Gouchman.

The above list was unanimously approved.

Mr. Kharitchkoff spoke on the place which the chemistry and geology of petroleum should occupy among natural sciences; and Mr. Rakusin then spoke upon the necessity for creating a school for the petroleum industry, the speech of the latter gentleman closing the sittings of the second section of the Congress.

THIRD SECTION.—LEGISLATION AND COMMERCE.

This section, the President of which was Mr. Louis Dejardin, held its first sitting on September 9th, Mr. Malachowski taking the chair.

Dr. Paul Schwartz was the first speaker after the sitting had been opened, giving an account of the German capital invested in the Roumanian petroleum industry. He said that until 1905 there had been invested in the Roumanian petroleum industry 130,000,000 francs of exclusively German capital. In 1906 and 1907 these investments were considerably increased. In 1905 German capital participated in the total production to the extent of 61.32 per cent.; Dutch capital, 12.56 per cent.; American capital, 1.90 per cent.; and Roumanian capital, 19.61 per cent. The English, French, Belgian and Italian concerns were still in their preparatory stage.

Mr. Bartoszewicz then read a lengthy paper on the "Galician Petroleum Industry."

Mr. Al. Loudon, Dutch Government delegate, speaking of the resolutions adopted by the Congress, remarked that if those resolutions were not accompanied by an explanation of motives they had no chance of success. He proposed to ask for the support of the Roumanian Government to intervene with other governments in order to attain the realisation of the resolutions passed by the Congress.

Mr. Dejardin, Belgian Government delegate, spoke in the same sense in regard to the exposition of motives.

Mr. V. Toroceanu, maintained that before a government could associate itself with the views of a congress and take steps for their realisation, it was necessary that the Congress should have all the questions relating to them thoroughly prepared, and the motives clearly explained. Only then could a government select those of the resolutions which were more urgent and best reasoned, and take steps for their realisation.

Mr. D. Stourdza, the Roumanian Prime Minister, pursuing the idea of making the labours of the Congress as fruitful as possible, asked that the Congress should help the Government in the matter of the realisation of its views. Mr. Stourdza believed that those recommendations had to be supported by the reasons as far as possible, and their urgency made evident, in order that they might be taken into consideration. In regard to statistics, he doubted whether it would be possible to induce all countries to change their units of weights and measures, but he believed that those countries which do not possess the metric system could without any in-

convenience accompany them by the figures obtained by the transformation into the metric system.

In regard to safety regulations in ports, or the organisation of ports for avoiding accidents, it was incontestable that the Congress could play a beneficial part in drawing the attention of the various governments to the latest innovations or the best solutions achieved in this or that port or country.

Mr. Stourdza raised another question, which might be a subject for international legislation, and that was the conditions which tank steamers or other means of transporting petroleum had to satisfy, especially for navigation of international rivers. On that subject the views of the competent persons taking part in the Congress would, he added, be very interesting.

Mr. Malachowski thanked Mr. Stourdza for his speech and for the warm support which he had given to the Congress by taking part in its sittings and giving the members the benefit of his wise and experienced counsel.

Mr. D. Dobrescu urged also the necessity for all recommendations to be accompanied by a clear statement of motives. He further proposed that the delegates of the different governments should be empowered by the Congress to bring those recommendations before their respective governments. They could report the results of their efforts to the bureau of the Congress or submit them to the following Congress.

Mr. L. Dejardin said that he believed that the second Congress would have better fulfilled its task if its recommendations were accompanied by an exposition of motives. And this notwithstanding that those recommendations were voted in plenary sittings of the Congress and after protracted discussion by the different sections.

The President then put to the vote the following two propositions:—

1. Nomination of a commission to study the question.
2. That the existing delegates be given a mandate to realise the recommendations of the Congress.

A discussion ensued upon the question of the mode of nomination of the commission and the rights to be conferred on the members.

The President expressed the opinion that the members of the commission should be nominated at the plenary sitting of the Congress.

Mr. Stourdza, speaking from the point of view of a Government man, believed that the recommendations of the Congress, if accompanied by a statement of motives, could be accepted by his colleagues and subsequently

embodied in bills for Parliament, for Ministers had not the time to study the details of those questions.

The President announced a plenary sitting for the afternoon for the purpose of nominating the commission.

The meeting was then adjourned.

At the afternoon sitting Mr. Dejardin, who occupied the chair, again took up the question and congratulated the Congress upon having the advantage of the valuable advice of Mr. Stourdza, the Roumanian Prime Minister. Mr. Dejardin reminded those present that as a result of the first Congress a permanent committee existed. It was true that that committee had no relation either with the committee of the second or that of the third Congress. Toward the end of the sittings of the second Congress a permanent committee was elected, but the vote having been taken without preparation, a large number of persons elected did not wish to serve, and so the committee fell into disuse. Mr. Dejardin, nevertheless, believed that a permanent committee who would prepare and study all questions relating to the petroleum industry was necessary.

Mr. Spies, general manager of the Steaua Romana, supported Mr. Dejardin's proposal, and although all the recommendations could not be realised, the best way of arriving at the realisation of some of them was through the medium of a permanent committee. Mr. Spies reviewed the associations existing in various countries, and believed that delegates representing these associations ought to compose the committees.

Mr. Torocanu thought the committee in each country ought to consist of delegates of private societies and of the government of the country.

Mr. Dejardin admitted the desirability of such composition, but feared that some governments might not wish to appoint delegates.

The meeting then adjourned.

DR. S. AISINMAN'S PAPER UPON BUSTENARI PETROLEUM.

(Concluded from page 230.)

The nitrification was carried out in the following manner:—The fraction in question was treated successively by mixing continuously and under strong cooling with water, with an amalgam of H_2SO_4 concentrated and fuming HNO_3 in the proportion of 1:1, the temperature not exceeding 15 or at the most 20° C.

By this process the mononitrated products were eliminated in the form of yellow and orange coloured oils, and the whole liquid separated itself into three layers:—Lowest layer, acid; middle layer, consisting almost entirely of mononitrated products, and the upper layer, containing the other hydrocarbons, which by the solution of the nitrated products and of the nitrous oxide were coloured more or less yellow.

Poured over ice or fresh water, the acid layer, after being weakened, yielded 2.5 per cent. of dinitrated products in the form of drops of oil, which under the influence of cold, formed crystals.

After having established the presence of aromatic hydrocarbons in such considerable quantities, the cause has been found for which Bustenari illuminating oil has such a great tendency to form carbon in lamps manufactured and used extensively in Germany (round Kosmos burner 10 mm and 14 mm.), and why its illuminating power is smaller.

It is known that the more molecules the carbon contains the smaller is the heat developed in burning. This development is, for example:—

	C.	H.	Calories.
A Deka $C_{10}H_{22}$ at	84% +	16%	= 11.800
A Deka $C_{10}H_{20}$ at	86% +	14%	= 11.500
Naphtene-Tetrameth $C_{10}H_{14}$ at	90% +	10%	= 10.400

The heat effect of aromatic hydrocarbons is less by 12 per cent. than of thick hydrocarbons, and about 9.5 per cent. less than of naphthenes.

The influence of aromatic hydrocarbons on the tendency to form carbon is directly checked in the following manner:—To Russian "Meteor" oil were added 5 to 10 per cent. of xylol, and this produced in it the same phenomena as are observed in Bustenari oil.

The extent of the tendency to form carbon, the so-called smoke test, has been established in the following manner:—The flame of a Duplex burner was lowered until smoke was produced. On three metal supports fixed on the glass chimney, at a distance of about 5 cm., a white plate was put on, which for a minute remained exposed to smoke emanations. The deposits vary in colour from light grey to black, according to the origin of the oil used, thus:—

1. American, W.W.	White
2. Standard White	"
3. Russian, Meteor	Light grey
4. Russian, Nobel's	"
5. Roumanian, W.W.	Grey
6. Campina, illuminating oil, 0.816	"
7. Bustenari, 0.817	Black.

In order to be able to carbonise completely, i.e., to bring up to white combustion the C. eliminated by combustion, it is necessary to artificially create more favourable conditions. We will consider later what these more favourable conditions have to be.

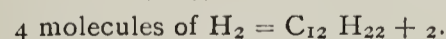
First of all, we have to find a method of modifying or completely eliminating the aromatic hydrocarbons. The experiments made with a solution of permanganate and persulphuric acid to oxidise them in order to bring about condensations by means of formaldehyde, and to produce picrates by means of picric acid, have not produced the desired result.

In nearly all the reactions the non-aromatic hydrocarbons were attacked at least in the same degree, and in some cases even more strongly than the aromatic hydrocarbons. Nor did nitrification lead to any result. We, therefore, had to resort to the use of the Sabbattier-Sandersen method, and thus produce with the aid of contact substances Ni, an accumulation of hydrogen.

Re influence of the monohydrate of 99 per cent. sulphuric acid, of 50 per cent. oleum, and of 1.48 nitric acid on Bustenari illuminating oils—

Fraction.	Spec. Grav. at 15° C.	Illuminating Power in Kosmos 10".	Colour.	Diminution in Volume.		
				Treatment with 100% Sulphuric Acid.	Treatment with 50% Oleum.	Treatment with a double volume 1.48 Nitric Acid.
1	0.7729	—	—	4.0	18.2	16.5
2	0.7757	—	—	4.2	19.7	16.5
3	0.7788	—	—	5.0	20.0	17.8
4	0.7823	—	—	5.0	21.1	19.0
5	0.7856	—	—	9.9	21.1	19.8
6	0.7890	9.4	light grey	12.5	21.9	20.0
7	0.7928	8.3	grey	17.5	24.1	21.0
8	0.7966	8.8	"	17.5	25.3	22.4
9	0.8009	8.4	"	17.9	24.0	22.0
10	0.8055	8.1	dark grey	18.6	24.1	22.5
11	0.8121	7.9	"	18.1	26.0	24.2
12	0.8181	7.9	"	12.9	27.4	24.0
13	0.8231	7.3	"	9.6	25.8	25.0
14	0.8301	6.6	"	8.1	28.0	24.0
15	0.8378	6.3	grey black	7.9	28.8	24.0
16	0.8460	5.1	"	8.8	26.6	24.0
17	0.8551	2.9	black	11.2	28.6	24.5
18	0.8657	2.1	"	6.0	29.4	24.0
19	0.8734	2.0	"	13.1	29.3	26.0
20	0.8954	—	—	24.8	36.4	30.0

For 1 molecule of $C_{12}H_{22}-6$, there would be required



The experiment was made in the following manner:—The oil was introduced drop by drop into an iron vessel, heated up to 310° C., the oil being immediately gasified. The gas was taken up by the current of hydrogen, and conducted into a glass tube filled with reduced Ni, kept as far as possible at an even temperature.

Bustenari illuminating oil distillate was thus treated in an Ni tube at a temperature of 200-220° C., and it was found that in this way its specific gravity is changed from 0.826 to 0.823.

The contents of non-saturated hydrocarbons fell from 9.3 to 4.2 per cent., and when treated at a temperature of 270-280° C., even to 2.8 per cent. The contents of aromatic hydrocarbons also declined, and, in fact, from 52 per cent. of the nitrous hydrocarbons it fell to 40 per cent. The best results were obtained by the use of reduced Cu as the contact substance. The temperature in the tube was maintained at 220° C.

The specific gravity of the distillate changed but little (from 0.826 to 0.822), but the boiling point was changed from 110° to 150° C., and the composition became of quite a different aspect.

From the starting of boiling up to 250° C., the distillate yielded:—

Before treatment—

Between 110° and 250° C.—87.7 % of a spec. grav. of 0.8192

Residue, above 250° C.—12.3 % „ „ „ 0.8869

After treatment—

Between 150° and 250° C.—69 % of a spec. grav. of 0.8026

Residue, above 250° C.—31 % „ „ „ 0.8435

This very encouraging experiment could not be followed up owing to the too great intoxicating power of the contact material.

An attempt to treat the oil according to the system of the Deichler Patent, by metallic Na was not successful either. The only result obtained by this means was a favourable change in the odour of the oil.

We then passed on to the method of sulphuration. First of all, the Bustenari illuminating oil was divided into 20 fractions, and it was tried to see how these fractions behave with H₂SO₄ (parallel with sulphuric acid). The 0.816 illuminating oil has shewn, when mixed with 99 per cent. sulphuric acid monohydrate, a diminution in volume by 9.21 per cent., and by treatment with 50 per cent. anhydrate, a diminution of 25.4 per cent. The unfavourable treatment with such a powerful concentrated acid, at a high temperature, has necessarily produced a change in the choice of the concentration by sulphuric acid.

A heavy Bustenari illuminating oil of 0.8235 was dephlegmated and there was eliminated from it 3.9 per cent. of fractions boiling up to 300° C.

The change in illuminating power was also practically nil, namely, 9.9 candles instead of 9.5 candles, with a 14 mm. Graetz burner, and a falling off in illuminating power by 10 per cent. after nine hours burning.

The elimination of the non-saturated hydrocarbons by 100 per cent. of 99 per cent. acid reduced the specific gravity from 824 to 815, and raised the illuminating power, in the same burner, from 9.7 candles to 11.8 candles, but the diminution after nine hours burning increased by 4 to 20 per cent.

By treating the heavy distillate of 0.829 gravity with 25 per cent. of oleum, at a temperature of about 80° C., the specific gravity fell from 0.829 to 0.812, the illuminating power in a 10 mm. Kosmos burner being eleven candles.

The following experiment shews how powerful is the influence of oleum. A Bustenari distillate of 0.835 and a flash point of 36.5° C. and viscosity of 1.08, after being treated with 15 per cent. of 97 per cent. monohydrate and with 10 per cent. of 20 per cent. anhydrate, was reduced to a specific gravity of 0.820, with a flash point of 46.5, retaining the same viscosity.

This shews to the industry, the direction in which to work, although the sacrifices connected with these chemical changes are still very serious. The losses in refining, and the cost of the chemicals, are very heavy. The laboratory has still before it a serious labour: to find the most advantageous proportions, to determine exactly the concentration and doses to be used, and to render possible the industrial utilisation the sulphuric products, and the regeneration of the acid used.

Parallel with the investigations in the chemical laboratory, an investigation has also been made into the influence of the construction of the burner on the illuminating power of Bustenari oil.

Of the photometric tests, which were made with burners of various systems, a few are given in the following table:—

INFLUENCE OF THE FORM AND HEIGHT OF THE GLASS CYLINDER ON THE ILLUMINATING POWER OF BUSTENARI OILS,

	Average candle power.	Consumption in grammes per Heffner candle per hour.	Diminution in illuminating power after 9 hours.
Kosmos burner, 14 mm, with its own chimney..	5.4	4.1	21.7
Kosmos, 14 mm burner with Graetz chimney..	10.0	3.1	33.3
Reform burner (round) 14 mm. with button ..	7.9	4.3	15.0
The same burner, glass chimney, 4 cm. taller..	9.3	3.9	15.3
The same burner, without button	9.8	3.5	15.2
The same burner, without button, but with glass chimney, 4 cm. taller..	10.6	3.4	15.2
Patent burner, 10 mm. (round)	4.7	4.3	14.0
The same burner, the cylinder being 5 cm. taller	8.5	3.6	12.1

It will be seen from these figures to what extent the preheating of the air and the greater draft influence the burning qualities.

The final result of these experiments is that the large quantity of carbon in Bustenari petroleum required for the purpose of favourable carburation a sufficient quantity of air, which particularly necessitates preheating.

Thus the apparent disadvantages is changed into a very great advantage, namely, the carbon brought to an incandescent state gives a perfectly white and intense flame. This is successfully accomplished by placing on the ordinary round Kosmos burners of 10 mm. and 14 mm. a metallic button which exposes the air to intense preliminary heating, and enlarges the diameter of the flame, which in itself brings about a higher temperature. The results obtained are shewn in the following table:—

THE INFLUENCE OF PRELIMINARY HEATING ON THE COMBUSTION OF ILLUMINATING OIL OF VARIOUS ORIGIN.

Description of oil.	Spec. gravity at 15° C.	Viscosity.	14 mm. Kosmos Lamp with its own chimney.			14 mm. Kosmos Lamp with Graetz chimney.			14 mm. Kosmos Lamp with its own cylinder and button.		
			Av. illum. power in Heffner candles.	Consumption in grammes per hour per c.p.	Diminution after 9 hours.	Av. illum. power in Heffner candles.	Consumption in grammes per hour per c.p.	Diminution after 9 hours.	Av. illum. power in Heffner candles.	Consumption in grammes per hour per c.p.	Diminution after 9 hours.
American (W. W.)	0.795	1.09	11.3	3.3	5.82	14.1	3.0	2.1	13.4	2.7	9.2
American (St. W.)	0.7991	1.09	11.9	3.2	32.1	13.3	3.1	27.2	13.3	2.8	20.8
Kansas	0.8062	1.04	9.4	3.5	21.0	14.5	2.9	19.2	14.3	2.5	14.5
Texas	0.8196	1.03	7.4	4.2	33.7	12.6	3.2	21.6	11.0	3.0	50.9
Russian	0.822	1.08	9.6	4.3	22.1	14.1	3.1	7.6	13.5	2.9	9.9
Bustenari.. ..	0.820	1.05	5.4	4.1	21.7	10.0	3.1	33.3	13.6	2.9	21.2
Campina	0.812	1.05	10.2	3.6	13.8	15.5	2.8	3.5	13.6	2.6	9.8

The percentage of fractions of a boiling point up to 150°, 150 to 250° and above 250° C. remained practically the same. The specific gravity of the fractions, more especially of the heavier ones, have, however, altered materially.

Before treatment with oleum:—

From start of boiling at 118° C. to 150° C.—8% of sp. gr. 0.7741

150° C. to 250° C.—76.7% „ 0.8280

Residue above 250° C.—15.1% „ 0.8943

After treatment with oleum:—

From start of boiling at 127° C. to 150° C.—6.83 of sp. gr. 0.7739

150° C. to 250° C.—77.30% „ 0.8131

Residue above 250° C.—16.83% „ 0.8671

In a 14 mm. Kosmos burner with its ordinary chimney, the non-carburetted illuminating oil, after the lamp had been burning for eight hours shewed:—

Average Illuminating Power.	Consumption per Candle per hour.	Diminution in Illuminating Power.
4.4 candles ..	4.7 grammes ..	35.5%
The treated illuminating oil shews against this:—		
12.3 candles ..	3.1 grammes ..	19.3%

Thus we here see a way which promises many improvements. By this means, the oil as it is at present produced, may be used to better advantage without modifying its composition, and this is the more easy to accomplish, as all kinds of oils can only gain by it.

The first way, however, promises for the future other possibilities for the utilisation of Bustenari oil, and for this reason it must not be neglected but followed up until the desired end has been reached. If we have only spoken of Bustenari crude oil, the results are nevertheless of great importance since a large part of the petroleum producing fields in Roumania, as for example those of Baicoi-Moreni yield a product similar to that of Bustenari, and the experiments apply equally well also to them.

It is necessary to mention that the material for this paper is no the work of one man, but of several colleagues, among whom I would mention Mr. Hirsch and Dr. Wischin, Dr. Schröter and Dr. Hausmann.

THE EUROPEAN PETROLEUM COMPANY, LIMITED.

ANNUAL MEETING OF SHAREHOLDERS.

The ordinary general meeting of the shareholders of the European Petroleum Co., Ltd., was held on Tuesday week at the offices, Dixon House, Lloyd's Avenue, Fenchurch Street, London, E.C.—Mr. H. Pike Pease, M.P., (chairman of the company) presiding.

In moving the adoption of the report for the past year (already published in the REVIEW) the Chairman said the gross profit derived from oil sold, steamers' freights, etc., amounted to £92,042, as compared with £64,715 in the previous year, an increase of £27,327. On the other hand, repairs to steamers were £9,918, against £13,679, shewing a reduction of £3,761. The balance carried down was £75,438, as against £44,675, an increase of £30,763. Debenture interest and interest on loans absorbed £43,185, and the directors proposed to allocate £70,000 to reserve. It must be noted that there had been not only an entire suspension of work at Baku for sixty-nine days—about one-fifth of the year—but that much damage had been done to most of the wells. There were, however, favourable indications for the future. Taking the financial year as a whole, the manager reported decided improvement in the general conditions as compared with the two previous years. There were strikes and disturbances over the entire Baku region during the first few months of the year, and notwithstanding concessions and improvements in the conditions of service, the manager reported that if he endeavoured to exact from the workmen a fair amount of work, he brought down upon the administration the wrath of the men, who carried petty grievances to terrorist societies, which were the means of causing strikes if their demands were not fully satisfied. The prospects of combination among the owners to fix a standing wage for the different classes of workmen was found hardly practicable, on account of the refusal of the several races to trust and act with one another. Several firms had adopted the principle of interesting their workmen in the production, and the directors proposed to make some arrangement of this kind on the first available opportunity. Having entered into an arrangement with the workmen last April, whereby for this calendar year's work two months gratuity would be paid provided no strike occurred, it was hoped that no further serious demand would be made before the end of the year.

The net output of crude oil upon the company's properties for the financial year was 5,412,062 poods, as against 5,340,531 poods, the net deliveries being 4,390,109 poods, which was a slight improvement. The output of the entire Baku region was 454,144,000 poods for the twelve months ended May 13th, 1907, as compared with 370,916,372 poods in the preceding year and 603,514,428 poods in 1904-5. Prices had been well maintained during the year. The output of the Baku region was still insufficient to meet the Russian demand, apart from the export trade, which had latterly shewn decided im-

provement in respect of both European and Far Eastern markets. Under present circumstances the output could not be expected to exceed 40,000,000 poods to 45,000,000 poods per month for some time to come. They could only suppose that the current high prices would be more or less maintained, though some reduction had lately taken place. They hoped, therefore, to be able to report a good average selling price for the present financial year. At present the company had six wells in course of boring, and a further eight had been started. At the commencement of the year nine wells were under repair or deepened, and a further three had since been taken in hand. Some of the plots had never recovered from the stoppage of August, 1905, when the best wells were flooded and lost. They were now employing screwing casing in the hope of arresting the inrush of water. At present they had 28 wells baling, four repairing and seven boring. The steamers were bringing in a welcome addition to the income.

The gross profit for the year, £24,900, would be considerably increased in 1907-8. Having three steamers on charter for a year, they did not immediately obtain the full benefit of rising freights; but all the ships were well and profitably employed, and there was every prospect of satisfactory earning. Operations had been discontinued at Hora, where, although oil was found in every case in the experimental borings, the quantity was insufficient to justify systematic examination of deeper strata. The Roumanian property was being successfully worked by the Roumanian branch of the Standard Oil Co. The storage and refinery at Thames Haven were not producing any income at present. On the recent expiry of the lease to the Roumanian Oil Trust (which the lessees did not renew), the directors decided to carry on a storage business, for which the premises were admirably adapted. The establishment of such a business was a question of time; but in view of the increasing importance of liquid fuel to the Admiralty and the mercantile marine, they were assured of the prospective value of the business, and considered they would do wisely to keep it in hand and await events. He was decidedly of opinion that in 1908 they would be able to report a much more favourable result of the company's operations if no serious labour troubles occurred in the Baku region. He moved the adoption of the report and accounts.

Mr. J. Howard Fox seconded the motion.

Mr. Harris asked whether, in the opinion of the board, the sum of £390,000 written off for depreciation of properties was sufficient.

The Chairman, in reply, said that it was his personal opinion that the amount written off was not sufficient; but it was all they could do.

The report and accounts were unanimously adopted.

Mr. W. Ritter Von Ofenheim, in addressing the shareholders, said the Thames Haven installation sooner or later would become a very valuable asset with the development of the use of liquid fuel in this country. As to the oil properties of the company, the board had to concentrate their efforts upon the Baku field. It was necessary always to be renewing the life of oil properties

by acquiring further territories. This could be done either by securing areas at little cost in unproven regions, where the results of development were quite problematical, or by paying more for similar areas in proven districts, where they were relatively sure of some return for money spent on development. The latter was the right course for them to follow, and it would be followed.

Mr. Charles Lock said that the company would doubtless have to face the question of capital reduction ere long. If prices and output were maintained as they hoped, they should be able to place themselves on a fair commercial basis by reconstruction of capital, and perhaps pay a moderate dividend. He was quite satisfied that the management in Baku was efficient and economical, and in London everything possible was done to reduce expenditure.

The retiring directors (Mr. H. Pike Pease, M.P., and Mr. J. S. Barwick) were re-elected, and the auditors having also been reappointed, the meeting closed with a vote of thanks to the chairman.

THE KEROSENE TRADE OF BANGKOK.

The Acting-Consul at Bangkok, reporting upon the trade of 1906, states that the kerosene imports indicate a decrease of 329,849 gallons, as compared with the figures of 1905, amounting to 5,403,349 gallons, and valued at £89,497. The places of origin of the petroleum imports were as under:—Sumatra, 3,432,556 gallons; Singapore, 289,822 gallons; United States, 1,301,768 gallons; Borneo, 379,179 gallons; and Cochin-China, 24 gallons; or a total of 5,403,349 gallons. The imports into Sumatra shews a great falling-off as against 1905, whilst the quantity imported from the United States, which in 1904 amounted to only 18,134 gallons, rose to 1,301,768 gallons in 1906. As pointed out in last year's report, the establishment in 1905 of an agency of the Standard Oil Co. doubtless explains these figures. The value of kerosene imported in 1906 shews a considerable falling-off in the average price per gallon as against 1905 (1905, 36 ticals per gallon; 1906, 26 ticals per gallon).

TO DEVELOP OIL IN BARBADOS.

The Acting-Governor of Barbados, in the course of his blue book for 1905, states that an attempt is being made to develop, or rather to explore the oil resources of the island by an application of the Hon. A. C. Ponsonby for an order under the Oil Mines Act of 1904. This order requires the sanction of the legislature, which will no doubt in due course be given, as it is very desirable in the interest of all that some measures should be taken to ascertain the actual value of this asset of the colony.

ALGERIAN KEROSENE IMPORTS.

From the annual report of the Acting Consul-General upon the trade of Algeria during 1906, it appears that during the year there were imported 2,773,298 gallons of kerosene, these being valued at £70,460. The countries of origin are given as the United States and the Black Sea. The petroleum imports during the year to the port of Philippeville amounted to 1,358 tons, being an increase of about 150 tons as compared with the figures for 1905.

RUSSIAN AND ROUMANIAN NOTES.

The New Refinery of the Aquila Franco-Romana Co., erected near Ploesti, is now practically completed, and is expected to commence working in two or three weeks.

Another Lesson to English Companies.—The Naftalan Petroleum Co., operating at Baku, has in its second financial year 1906, earned a profit of 293,430 roubles on a turnover of 2,363,534 roubles. A dividend of 10 per cent. has been distributed.

Baku Production.—The Production of crude oil at Baku during the first 15 days of October (o.s.), amounted to 18,422,146 poods, to which Bebe-Aibat contributed 5,182,127 poods. Spouters have yielded 16,000 poods at Saboontchi, and 12,000 poods at Bebe-Aibat.

A New Roumanian Oil District.—A trial boring drilled at Filipesti de Targ, situated between Baicoi and Moreni, has reached the first oil stratum at a depth of 90 metres. The oil is not very abundant, but is nevertheless important as marking the discovery of oil in a new district.

The International Company.—The production of the International Co. at Gura Ocnița has lately been doubled by the spontaneous increase in the yield of their well No. 15. The company's production at Bustenari is also satisfactory, and the total daily output is from 180 to 200 tons.

More Good Dividends.—The Aramazd Petroleum Co., of Baku, has for its fifth financial year, 1906, earned a profit of 1,403,437 roubles, and distributed a dividend of 16 per cent. The company has creditors for 684,143 roubles, and debtors for 955,549 roubles. The company's capitals aggregate 5,030,880 roubles.

Messrs. V. Rops and Co., petroleum refiners, of St. Petersburg, have in their tenth financial year, ended on 1st April, 1907, made a profit of 185,911 roubles on a total turnover of 1,588,219 roubles. A dividend of 8 per cent. has been declared. The company has debtors for 277,143 roubles, and creditors for 312,518 roubles. The capital aggregates 2,044,764 roubles.

The South Russian Petroleum Company, an English company owning a property in the Jionet district in the Province of Tiflis on the Caucasus, has published its second balance sheet for the year 1905-6. The company is not yet producing. The issued capital is £99,800. Expenses incurred £10,477. The property is valued at £105,338. There are creditors for £17,098.

The European Petroleum Company, Ltd., who own some petroleum properties in Roumania, but who have hitherto been trading there under the name of William Fowler, have now applied to the Roumanian Government for recognition and permission to open a branch office in Roumania. The permission has been granted, and Messrs. Watson and Youell will be appointed the company's representatives in Roumania.

Roumanian Exploitation.—Among the exploration work now in progress in various parts of Roumania may be mentioned a well which the Steaua Romana is drilling at Salcea in the department of Prahova. At Capaceni a borehole has been started by Mr. Bernstein, of Berlin. The Pleyte Syndicate is continuing energetically its borehole at Bucsani. The Alpha Co. has started its second trial boring at Nucet, the first borehole having failed to strike oil.

Exploiting for Oil.—The Moscow Society is drilling a well near Yashma station on the Baku Petrovsk branch railway. The well has now reached a depth of 700 feet without finding any traces of oil, although there are indications of its existence. About 12 versts distant, at Kiliasi, Messrs. Ponomarevski and Co. have started two boreholes. The first, after going past a flow of oil of 500 poods daily, without notice at 840 feet, was abandoned at 1,400 feet. The second well has reached a depth of 1,260 feet without finding any oil.

Concerning Natural Gas.—The Russian Minister of Commerce and Industry has submitted to the Council of Ministers a proposal to authorise his department to permit persons or companies holding petroleum concessions under the temporary regulations of the 14th May, 1900, for the exploitation of petroleum to also produce natural gas, and to temporarily relieve them of the obligation to carry the wells, within a period of three years, to 1,400 feet depth, if at a smaller depth natural gas has been struck, the monthly yield of which has a heating power equal to that of 10,000 poods of crude oil.

The BAKU RUSSIAN PETROLEUM COMPANY, Ltd.

ANNUAL MEETING OF SHAREHOLDERS.—UPROARIOUS PROCEEDINGS.

The eighth annual meeting of the shareholders of the Baku Russian Petroleum Co., Ltd., was held at Winchester House, E.C., on Wednesday, and terminated as one of the greatest fiascos associated with company meetings in London.

COLONEL IVOR PHILIPPS, M.P., presided, and the attendance was one of the largest, if not the largest, on record.

The Chairman's speech, which occupied a little over an hour, was in the first portion devoted to a detailed description of the capital expenditure during the year under review. He then came to the last item upon the profit and loss account, this being £1,273 11s. balance transferred to properties account. He did not for a moment wish to tell the shareholders that that was a satisfactory balance, but if they went through the report they would understand what had brought that about. It could be put under two headings: the 1905 contracts and the two months' strike during the year. The former cost them a considerable sum of money, and as for the strike, he put that down at between £30,000 and £50,000.

The policy of the board had been to develop the company's property, and he felt sure they were now approaching the time when they would get satisfactory results from their extensive boring programme. In July, 1906, the shareholders would remember that as the result of many extraordinary meetings of the company the board accepted the nomination of two gentlemen, and they had hoped that by so doing they would have brought peace to the company. But, unfortunately, the agitation had not been put an end to. Certain charges had been made against the board, and they had issued a circular answering many of them, but they left out all those charges as far as possible which referred to mismanagement at a period anterior to the appointment of the present Board. He did not wish to shirk any responsibility for any action taken in 1905, but he desired to forcibly impress upon the shareholders the fact that the five new members of the board—an overwhelming majority—elected last year had nothing whatsoever to do with the result which was put before the meeting that day. (Cries of "Oh!") One of the charges was that the company had started with insufficient working capital, but how could the present board be responsible for that? And, again, it was said that the refineries were sold to pay liabilities. Well, how could the board be responsible for that either?

A charge had also been made that the company was putting out the boring of its wells to contractors, and in reply he would say that, if by doing that, they were committing a great crime, that crime was being also committed by other producers, for 80 per cent. of the wells were bored by contract. As to the cost of production there was no doubt this had gone up enormously, but the real and chief reason was that the wells were on the average yielding less oil than formerly, and if the average yield of oil was reduced, then it stood to reason that the cost of getting it likewise increased. All he could say was that the board was doing all it could to increase the production of oil, and the delay was simply due to labour troubles.

He then came to what he described as a wonderful story of £400,000, and he hoped that day that he would be able to nail the lie direct to the counter once and for all. Mr. Rutherford had said that the contracts made with the Mazout Co. probably cost their company £400,000. The speaker did not wish to discredit Mr. Rutherford's calculations, but the data upon which he made them was not correct. The whole value of the oil made under those contracts was only £265,000, so that if they had given their oil away, they could not have lost a greater sum. Then they were told they had made no serious effort to meet the financial situation, and had prevented others from doing it. The board, as a matter of fact, was only too anxious for others to help the company if they could. The board had not refused any firm offers; on the contrary, they had entered into negotiations even with the gentlemen who were conducting the agitation, but so far they had not been able to help them. The board was as anxious as anyone to put the financial affairs of the company upon a satisfactory basis, but it was almost impossible to do so as long as that agitation was going on. ("No, no.")

The board hoped that the shareholders would realise before it was too late that a house divided against itself could not stand. The board's schemes had failed so far, owing to the withdrawal of financial support when it was found that there was an active and perpetual hostility to the board. As a board, they would not unwillingly abandon the interest committed to them, for by so doing (if they did) they felt that they would be placing the

management in the hands of those in whom the large majority of shareholders had no confidence. ("No, no.") He then moved the adoption of the report and balance sheet, the former being published in full upon page 268 of this issue of the REVIEW.

Mr. W. WATSON RUTHERFORD, M.P., said he sincerely sympathised with the directors in being obliged to meet the shareholders and to inform them that the prices obtainable had been the best since the company was formed, and yet they were obliged to apologise for a report and statement of accounts which were the worst that the company had ever put forward. But it was no use the board simply shielding themselves behind the suggestion that they were not responsible for the things which had taken place. He was, therefore, going to propose an amendment, of which he had given written notice, "That the report, balance sheet and accounts be received, but not adopted, and that a committee be appointed to look into them and also to consider the questions of management and finance and to report, and such committee have the right to see books and papers notwithstanding article 104." There was not the smallest hostility on the part of himself or of the shareholders' committee to any individual member of the board. He would be sorry indeed to be associated with any movement which was got up to injure a company, and never in his life had he been a party to any company-wrecking proceeding of any sort or description. He was invited in the early part of this year to see whether he could help in raising the necessary money for the company, and that was his first acquaintance with it. He immediately approached the chairman requesting an interview, which he declined to give him, although he did eventually without prejudice. He (the speaker), however, could not get at the bottom of the matter. He and his friends had offered money to the company, but it was refused, and so he thereupon determined to go to Baku and see the property for himself. When he returned he immediately wrote to the board and stated that he had a mass of information to place at their disposal. Well, he desired to take the shareholders through the various items in the profit and loss account, and after he had done that he thought they would all agree with him that they should be looked into by a committee before they were passed by the shareholders. The Chairman had mentioned particularly the second item in the profit and loss account, "purchases of crude oil, including royalty oil bought from lessors, £19,370." This oil, he believed, was bought at 25 copecs, that being the price in 1906, and was sold by the company at 17 copecs, that being the price which they were supposed to be getting. He would shew, however, that they did not really get that price.

Then the Chairman had told them that £91,160 was charged as being laid out on capital account, but he did not say where they got that amount from. He supposed the effect of spending £90,000 when they had not got it was simply to add £90,000 to their liabilities. No depreciation had been written off since 1904. Another item which struck him was the £4,400 paid for water. When he visited Baku he found a magnificent water supply there. A new pipe had been laid down at very great cost, and it was absolutely lying unused. That was the kind of thing that was going on, and that was the kind of thing that would go on unless some of the directors took the trouble to go to Baku and see things for themselves.

He had made the charge that the company's properties had been neglected not by the board's predecessors, but by the present board. For instance, on plot No. 13, which was four and one-half acres in extent, there was ample room for more wells. Over 2,000 poods a day were got from the existing wells, but no boring was being done on that property at all. When he found that out he was disgusted with the management, both at Baku and in London. Regarding plot No. 48 he said to the management on the spot:—"Why don't you turn this into money; you cannot develop it"; but there was nobody there with sufficient authority to deal with the situation. Then plots 56 and 176 in Saboontchi had been already leased. He understood the lessors were willing to buy and pay cash for them. If the company was short of money, why could not the directors do something in this direction? On plot 173 there was a fountain some two or three months' ago, and an immense quantity of oil was got from it. There were three wells producing now on that property. The lease would expire in 1916. There were three wells in the course of construction and one under repair. There was room for 12 more wells on that particular property,

which was, perhaps, the most valuable bit of producing ground in the whole neighbourhood of Baku. There was only barely time now to put down the wells and to get a return before the lease expired, but that work was not being done. What he wanted to make clear was that when he visited the property he was satisfied that, with energy, ability and money, a great deal more could be done with it than what the present directors were doing. He did not know that the directors would wisely deny it; in fact, he did not think they could.

With regard to the serious question of production, the Chairman had not told the shareholders all the facts. In 1898 the production was 26,000,000 poods for fifteen months, or equal to 17,000,000 poods for twelve months; in 1899 it was 17,800,000 poods; in 1900, 24,000,000 poods; in 1901, 23,000,000 poods; in 1902-3, for fifteen months, 29,000,000 poods, or 19,000,000 poods for the twelve months; in 1904 their property was at the top with a production of 26,000 poods. There had, therefore, been a gradual rise in the production from the time the company was formed until 1904; but in 1905 it dropped to 15,776,000; in 1906 to 11,550,000—the smallest production in the history of the concern. That could not be defended, and he thought it required a little more excuse than the statement to merely state, "This is one of the acts of our predecessors." What was the good of pouring money into the property year after year with such a result? In the first half of 1907 the production was 6,473,000 poods, or at the rate of 12,900,000 a year. This was a little improvement on 1906, but still it was not half the production of 1904. He had been asked how it was possible that the amount of money referred to could be lost. He would give the Chairman the detailed figures. The total sales last year realised £176,377, and their production was 11,500,000 poods. That worked out at 12 1-5 copecs per pood, and the average price last year was 26 25 copecs per pood. If they took the production for 1906 at 11,550,000 poods they would see that £176,000 was only equal to 12 1-5 copecs per pood, but it was worse than that, because £19,370 worth of royalty oil had been bought and had to be paid for. Deducting that £19,370, the figure came out at £157,000. If they divided that by the production, they would find that the amount realised was only 10 8 copecs per pood, whereas the selling price of the oil averaged 25 copecs. In other words, if they took the production of 11,500,000 poods at 25 copecs per pood it resulted in £360,000, which was what they ought to have sold the oil at, whereas the amount carried into the account was £176,000. When he was at Baku he ascertained that the net production was not 11,550,000 poods, but 9,131,921, because the other amount consisted really of the royalty oil and of leakages of various descriptions. If they took all the leakages and the royalty oil off and worked it out at the average price which ought to have been got for the oil they would find that they only got 13 copecs per pood, whereas they ought to have got very nearly twice the amount—namely, 25 copecs. That amount had been lost to the company. With regard to the labour troubles and the fires, no one could go to Baku and see the mixed races there and the difficulties which had to be contended against without thoroughly appreciating the position, but the same conditions applied to every other concern in Baku, for every company had to face the same difficulties. Notwithstanding that, they found that instead of the production being maintained at 4 28 per cent. of the total production at Baku, it had gone down to 2 7 per cent. If they took the extra amount of the production which they ought to have had the result would have been £353,000—the total loss to their company as compared with what it might have been. If they had maintained their production at the same average of the whole production of Baku—that was 4 28 per cent.—and if they had got the market price the figure worked out at £843,000 more than they had received. If they had had the market price for their goods they would have had £490,000 more, and if they had had the extra amount of production they would have had £350,000 more than that. He did not know when the chairman spoke of "nailing the lie to the counter" if he referred to the speaker, but —

The CHAIRMAN: I did not personally refer to you.

Mr. RUTHERFORD: That being so I do not intend to retaliate in anything like similar language. Proceeding, the speaker said that the shareholders' committee complained of two things on the part of the present board—they had not done the best with the property, and they had shewn a want of activity. Five of the directors had been on the board for over a year, and they could see that the financial position was going to be desperate; they could see that they had given bills to the Mazout Company for £30,000 which, he believed, became due on the 31st December next. They also knew of the debentures of £120,000, less the Russian Government loan, which became due in July next year, and which would

require to be provided for. They further knew that £90,000 was wanted last year to be spent upon the property, and they had not got a penny to do it with. He did not gather from the Chairman that the directors had done anything towards obtaining the money which was urgently wanted to carry on the company. It would be no satisfaction to him (the speaker) or to any of his colleagues to go and sit on the board with five gentlemen on the opposite side ready to prevent them doing what they wanted to do with regard to the properties. They would absolutely decline to associate themselves with the present board of directors in any shape or form unless they were going to have some important say in the carrying on of the concern, so as to get some energy, if not ability, into the management. They did not want a long adjournment of that meeting; they wanted an adjournment for a week, so as to have a chance of meeting the board, of looking at the accounts and papers and get at the bottom of things. He hoped the shareholders would give him the credit of having come forward not to play his own game or to make any stupid and personal attacks upon any individuals, but of being actuated solely by a sincere desire to improve the prospects of the company in which they were all interested. He then moved his amendment, and mentioned that in the event of the amendment being carried, he intended to propose that the committee should consist of Messrs. W. Watson Rutherford, A. C. Holzapfel, F. Shaw Kennedy, Col. T. H. Morris and Arthur Gladstone, three to form a quorum.

Mr. C. HOLZAPFEL, seconded the amendment, and in doing so said that in the circular issued by the board on the 19th ultimo the chairman stated that the offer which he had made to the company to sell at current prices had not been made by him, but only an offer at a fixed price. He had looked up the correspondence and found that he did make such an offer. The letter containing the offer read as follows:—"In view of our recent conversation, and the fact that the Baku Co. requires financing to the extent of about £200,000, I have been in communication with a certain group who would be willing to advance that sum on condition that we sell to it the whole of our production for five or ten years, the price to be the average market price, less a reasonable allowance to be mutually agreed, the loan to be repayable by a deduction of so many copecs per pood on all deliveries, interest being payable at the rate of 6 per cent. per annum. Of course, we would not be able to start delivering under such a contract till the beginning of next year, but I might be able to arrange to get £50,000 advanced immediately on signing the contract. It will be apparent to you that an arrangement of this sort will be more agreeable to many shareholders of the company than selling ahead at a fixed price."

The CHAIRMAN stated that with regard to the amendment, on behalf of the board, that he was not prepared to agree to the adjournment of the meeting. He was advised that the proposal contained in the first part of the amendment was not in order, because it was not in the notice convening the meeting, but he would ask Mr. Stevenson, the representative of the company's solicitors, to deal with that matter.

Mr. J. STEVENSON said he thought the shareholders ought to know upon what ground the chairman had been advised that he could not accept the amendment. He referred Mr. Rutherford to the 54th article of the articles of association. There were 3,400 shareholders or thereabouts in the company, and there were present not more than 300 or 400. Only a section of the proprietors was present, and it would be quite unfair if the chairman allowed a resolution to be discussed of which the main body of proprietors had had no notice whatever. He desired to make that statement, but if the matter had gone to the question of voting there would be no question as to how the vote would go.

Mr. RUTHERFORD: Is that a threat? Proceeding, Mr. Rutherford said article 54 was an ordinary article which appeared in every company's articles of association. If the solicitor referred to "Palmer's Company Law," 9th edition, page 575, he would find it laid down by that eminent authority that a resolution to receive but not to adopt the report and accounts was perfectly in order. If the Chairman ruled his amendment to be out of order, it would come near to being a piece of uncommonly sharp practice.

At this stage there was considerable uproar, and several gentlemen called upon the Chairman to withdraw.

Mr. BEVERLEY said the amendment was an eminently sensible proposal, and he hoped that notwithstanding what had been said by the solicitor, the meeting would take the matter practically into their own hands and appoint a committee. In the amendment there was surely nothing to which the board could take exception. The more closely the accounts were examined the more support would the board have. He was at a meeting of one

company some time ago when they got into a similar position, and on that occasion the meeting took the whole thing into their hands and appointed a committee. That committee had done a great deal of good.

Dr. WHITTY asked whether the board was in a position to meet the liabilities of the company at the end of this year, and in the event of their not having the money, what was going to happen?

Mr. DAVIS, who said he was a holder of 2,500 shares in the company, said he had never taken part in the proceedings of that company before nor attended the meetings, but he appealed to the board to allow an adjournment for a week. He did not think the board ought to stand upon strictly legal ground. If the directors met Mr. Rutherford and his friends and agreed to adjourn the meeting, then there might be some harmony between all sections of the shareholders.

Mr. RUTHERFORD said that if the chairman would agree to meet the proposed committee and give them access to the books and papers, he would be willing to agree to a simple adjournment. He did not wish there to be any friction, and so he appealed to the chairman to grant the adjournment asked for.

Amid much uproar, the CHAIRMAN repeated that the board were not prepared to accept the adjournment. This remark was the signal for great disorder, many shareholders rising from their seats and putting on their hats. Cries of "Shame" were raised, while such forcible words as "rot" and "bunkum" were freely used.

The CHAIRMAN rose and said that he legally could not do as the meeting suggested *re* the adjournment, and as for the other part of the amendment, the board would not agree to it.

The uproar increased, and one gentleman above the general pandemonium of voices shouted: "You are afraid, that's why."

A SHAREHOLDER asked if the solicitor ruled the board, which remark brought forth the rejoinder from another: "They are beyond all ruling."

Mr. STEVENSON explained that it was his duty to advise the Chairman upon legal matters, and to keep the meeting in order. He added, of course, I might be wrong.

A SHAREHOLDER: Yes, and you know it.

Mr. STEVENSON said his ruling was the opinion of the highest court in the Empire, and they were bound by it.

Mr. RUTHERFORD then proposed an amendment that the meeting stand adjourned till that day week, at the same time and place.

Mr. HOLDEN seconded the proposition. He said he thought the time had arrived when something should be done. Why would not the Chairman agree to an adjournment?

The CHAIRMAN: But I have told you I am not prepared to accept it. (Cries of "Shame" and "Vote").

Mr. ST. JOHN WINNE contended that Mr. Rutherford was in order in proposing an adjournment, and remarked that the chairman was acting very unwisely in refusing an adjournment. In any case the proposition was a reasonable one, and to his mind it was thoroughly un-Englishlike and unsportsmanlike not to accept it. It might be legal or it might be illegal, but it certainly was reasonable and therefore ought to be accepted.

The CHAIRMAN said that if no one else wished to address the meeting he would reply to the questions which had been asked. Mr. Rutherford had gone into a lot of figures, and he could only repeat what he stated before—that probably his calculations were correct, but his data were wrong.

Mr. RUTHERFORD asked if he understood the chairman to rule that he would not even put the motion for adjournment.

The CHAIRMAN: I have said that I will not accept the motion for adjournment.

A SHAREHOLDER suggested that Mr. Rutherford should put the proposition himself, and Mr. RUTHERFORD then appealed to the Chairman again to allow the amendment to go to the meeting in the interests of the company.

The CHAIRMAN: I shall not accept the motion.

Dr. WHITTY asked the Chairman if he was prepared to answer his question. He said he really did believe that before the year was out the company would have passed into the hands of the people who had wanted it so long. The Rothschild and Nobel group were waiting for it, and the Chairman and board were doing all they could to play into their hands.

The CHAIRMAN said that he was not prepared to go into details as to the financial position of the company, because he did not think it would be to the interests of the company.

Mr. RUTHERFORD then put his amendment to the meeting and it was carried amid much enthusiasm practically unanimously.

The motion for the adoption of the report and accounts was

then put to the meeting by the Chairman and lost, 11 voting in its favour and 66 against.

The CHAIRMAN demanded a poll, which he stated would be taken at the close of the meeting.

Mr. DREW proposed the re-election of Colonel Ivor Phillips.

The CHAIRMAN, amid the general confusion which now prevailed, telling the speaker to "rush it through."

Mr. DREW endeavoured to do this, and asked for those "in favour" to vote. Very few, however, understood what they were to vote for, and so the resolution was put again, its nature being explained. It was then lost.

On a show of hands 16 voted in favour of the re-election of the Chairman and 56 against.

A poll was again demanded.

The CHAIRMAN then proposed the re-election of Mr. Alfred H. Drew, the other retiring director, which was seconded by Mr. B. Wimble.

The resolution was defeated on a show of hands, and again a poll was demanded.

Messrs. Turquand Youngs and Co. having been re-appointed auditors, the CHAIRMAN said that closed the proceedings.

Mr. RUTHERFORD here stated that he and his friends had given notice of their intention to propose several directors in the places of those who retired and had not been re-elected. His proposal had been legally deposited, and inasmuch as the Chairman had declared the meeting closed, he would put it himself. The gentlemen who had been suggested were Mr. A. C. Holzapfel, Mr. F. Shaw Kennedy, and himself. He, therefore, accordingly proposed the two first-named gentlemen.

A SHAREHOLDER seconded the motion and Mr. Rutherford's name was then proposed and seconded.

These names were submitted by Mr. Rutherford and were carried amid great acclamation, there being only six voting against. The directors did not vote, nor was any suggestion made as to the use of proxies against Mr. Rutherford's motion.

The meeting then broke up, but for some time the Chairman and board kept their seats.

THE BURMAH OIL COMPANY.

The following interim dividends have been declared by the Burmah Oil Company:—On the first preference shares of £1 each, 7½d. per share (equivalent to 6 per cent. per annum to June 30th, 1907), under deduction of income tax at 1s. in the £; on the second preference shares of £10 each, 6s. per share (equivalent to 6 per cent. per annum to June 30th, 1907), under deduction of income tax at 1s. in the £; on the second preference shares of £10 each, of which only £2 10s. was paid up at 30th June, 1s. 6d. per share (equivalent to 6 per cent. per annum to June 30th, 1907, on the amount paid up), under deduction of income tax at 1s. in the £; on the ordinary shares of £1 each, 1s. 6d. per share (equivalent to 15 per cent. per annum to June 30th, 1907), free of income tax. Dividend warrants were payable yesterday, the 8th inst.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date November 7th, 1907, as follows:—

The market is still exceedingly quiet and prices are easy. We make prices of oil sizes to-day:—

1c	18½ × 14	124 sheets	110 lbs.	..	14/- per box.
1c	19½ × 14	120 "	110 "	..	14/- "
1c	20 × 10	225 "	156 "	..	20/-

F.o.b. Wales. Tin lining and iron hooping extra.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	9-11
Baku Russian Petroleum ..	£750,000 Ord.	£1	2/3-2/9
"	£650,000 5½% Pref.	£1	4/3-4/9
Bibi-Eybat Petroleum Co. ..			1-1½
Californian Oilfields ..	£250,000 Ord.	£1	5-5½
Commonwealth Oil Co. Pref	18/- paid up (Prem.)		par ½
" Def..	£1 fully paid		1½-1½
European Petroleum ..	£550,000 Pref.	£1	1/0-2/0
"	£550,000 Ord.	£1	0/6-1/6
"	£376,000 Deb.	£100	70-74
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	3/6-4/6
"	£600,000 Ord.	£1	2/6-3/6
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	1-1½
"	£575,000 Ord.	£1	2/3-2/9
Shell Transport & Trading ..	£2,000,000	£1	41/0-42/0
Spies Petroleum Company ..	£1,000,000 Pref.	£10	9½-10
	£312,500	10s.	6/0-6/6

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Nov. 2nd.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	513	516
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,400	4,425
Mazout Co.	250	400	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	149	152
Neft Co.	250	—	—
Nobel Bros.	5,000	10,225	10,300
"	250	—	—
Rops and Co. V... ..	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading			
Co.	250	—	—
" (Second Issue)	250	—	—

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 os. 9d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 5s. od.
Burmah Oil, Ord.	£1,100,000	£1	£3 5s. 6d.
Do. Pref.	£250,000	£1	£1 5s. 6d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	£6 16s. 6d.
Do. 5% Pref	£18,900	£7	£4 13s. od.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 17s. od.
(17s. paid)			
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	£13 5s. od.
(17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	£13 os. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£3 os. od.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 9s. 6d.
Do. "B" Deb...	£150,000	£100	£152.

DUTCH COMPANIES.

Company	Latest Quotations (per cent.)	Florins.
Arnhemsche Petroleum Mij.	—	1,000
Aurora (Deb. 5%)	85	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	124	50
" (Deb. 4½%)	98	1,000
Gaboës	—	—
Holl. Rumeensche Petroleum Mij. ..	17	1,000
Int. Rum. Pet. Mij.	87	500
Java Petroleum Mij. (Ord.)	—	1,000
" (Pref.)	14½	—
Koninklyke Nederl. Pet. Mij. Shares ..	251	250-1,000
" Share certificates ..	244½	1,000
Mœara Enim Petroleum Mij.	122	100
" 1-1,000 Oblig. 5	—	250-1,000
" Moesi Ilir " Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij. ..	5	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	45	—
" (Deb. 5 %)	—	—
Panolan Maatschappij Cert.	—	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	110	1,000
" (Common)	—	—
Sumatra-Palembang Petroleum Mij ..	80	500
Tarakan Petrol Mij.	30	—
Zuid Perlak Petrol. Mij. (Pref.)	67½	—

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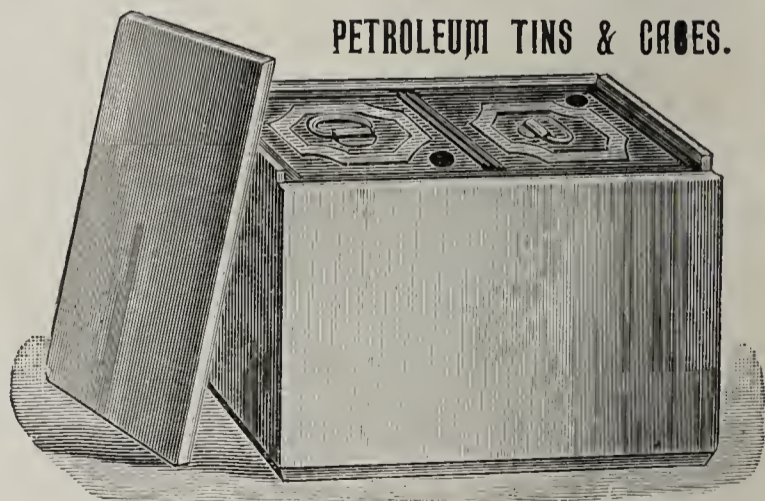
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SATURDAY, NOVEMBER 9TH, 1907.

VICTORY!

SOME months ago, when we saw the unmistakably growing strength of the agitation against the board of the Baku Russian Petroleum Co. and its policy, we prophesied that ultimate success was assured, and that consequent upon this, this most unfortunate of Anglo-Russian Companies would be lifted from its present ignominious position to greater things. But we must confess that we are agreeably surprised that that success has been so quickly achieved.

Being responsible for the inception of the agitation, it is a great pleasure to us to be in a position to first announce the news that victory is upon the side of the agitation, and that since Wednesday's meeting, a greater consideration for the wishes of the majority of the individual shareholders has been shewn by the board to the leaders of the agitation, which has culminated not in the open declaration of war, as one might easily have thought, but is what at this stage appears to us to be, the laying down of a basis of peace, as lasting as it will be beneficial.

It is perhaps somewhat premature yet that we should dwell at too great a length upon the conclusion of peace between two sections of the shareholders of a company,

both of which have shewn a fighting attitude,* for in the first place, many details yet to be arranged before the course set out upon by the agitation can be said to have been thoroughly covered, are still unsettled, while in the second, we have no desire to strike any discordant note when friendly feelings should prevail. But the fact remains that the occasion is one which has an importance of its own, and which cannot be overlooked by the REVIEW, which has, since agitation was first suggested, seen what a strong case had been made out for a free and open fight.

If the past, so far as the Baku Co. is concerned, can be buried, then the sooner the better, for it must of necessity be very distasteful to shareholders in a company which at its "launch" appeared to have so prosperous a future to find that year by year their shares have deteriorated in value until at the present time they stand at about one-sixth their par value. Time after time have the gentlemen responsible for the conduct of the company committed indiscretions which have each and every one assisted to the downfall of the company, and though the *personnel* of the board has changed more than once, it has been a case of the garment of the father falling upon the sons. Every effort to improve the conduct of affairs has for years past resulted, we might almost say, in dragging the concern deeper into the mire, until the company has come dangerously near to that point when there was every likelihood of the whole property passing away from its grasp. But this is a matter of history, and is too well known to need emphasis.

That something can and ought to be done to save total destruction has impressed itself upon many shareholders for a few years, and those who recollect the first attempt made on behalf of the general body of shareholders by Dr. Dvorkovitz, will remember how quickly the fire of enthusiasm spread throughout all classes of investors in the Baku Russian Petroleum Co. For a time, the "sop" given by the board in accepting two new directors appointed by the shareholders of Lancashire and Yorkshire respectively, was sufficient to minimise the enthusiasm of agitation, but another outburst was inevitable.

During the past few weeks we have seen how that renewed agitation has progressed, and we have not the least doubt that our readers have closely followed its several movements brought so near realisation at Wednesday's meeting of shareholders. The *finale* alone is awaited, and as we have already stated, this is summed up in the word which forms the heading to this article.

Victory has been, or is about to be secured, and that victory with honour. It would be out of place here to refer to the various phases of the movement which has brought about what gives every promise of being the inauguration of a widely different policy upon the board of management, for the most important steps have been taken since last Wednesday's meeting of shareholders. The weighty speech of Mr. Watson Rutherford, M.P., made it clear how far the leaders of the agitation would go to meet the directors, and also how far the directors of the company would have to go to satisfy those whose

views upon management so materially differed from theirs. Here are his exact words:—

It will be no satisfaction to myself or my colleagues to go and sit upon the board with five gentlemen on the opposite side who will prevent us doing what we want to do with the properties. Further, we will absolutely decline to associate ourselves with the present board of directors in any shape or form, unless we are going to have some important say in the carrying on of the concern, so as to get some energy, if not ability, into the management.

This then was the only basis upon which a settlement could be arrived at; and, knowing what we do, we can only say that the agitation has kept its word almost to the letter. It has been slowly but surely adding to its strength since the efforts in its worthy cause were renewed; but it was not until this week's general meeting, after the unwise ruling of the company's chairman, that it received its great and only sudden impetus. With almost unanimity the whole body of shareholders in the building, incensed by the fact that what appeared a properly proposed and most reasonable amendment should be strongly objected to by the whole of the members of the board, gave their support to the side of agitation; and though after the meeting—which we report elsewhere—the poll for the re-election of the retiring directors was in each case carried by a majority of over 286,000 votes, it must have been evident to the chairman of the company and his colleagues that the fight on their part had been unfair. When some six hundred shareholders vote for a change in the management, and about four hundred by sheer strength of proxies representing large blocks of shares, can to such an extent outweigh the effort to obtain a change, it must strike any reasonable and fair-minded man, that there is a tinge of unfairness about the whole proceeding. There is something, of course, to be said on the other side, yet if that simple parliamentary policy of "one man one vote" had in this case been able to claim its reward, the result would have been something on the lines of the resolution which was put to the shareholders amid the prevailing uproar toward the conclusion of Wednesday's meeting.

The directors have naturally seen this, and as business men, they must have recognised the almost impossible position in which they stood in "kicking against the pricks." Hence, we presume it is, that the agitation has, during the past two days, almost reached its goal.

To dilate further upon the matter would be to disregard confidence, but we believe we have already made it clear that victory is on the side of the agitation, and that in everything it set out to secure it has been successful. And yet not everything. The agitation—though now this word sounds uncommonly out of place—has its main work to do. Its voice has been heard, and now it remains for its efforts in another direction to bear fruit. Much has to be done, but much yet remains. The whole concern from top to bottom needs the hand of reorganisation—and that badly. The company have rich territory, and in the hands of its directors either lamentable failure or a successful career lie in the balance. We have already seen the former; let us hope that in the future we may see success. Then we can with renewed enthusiasm shout Victory! Victory!

The Petroleum Export Trade of Roumania.

Details Concerning the Constantza Improvements.

Several interesting details are given by Vice-Consul Pogson, in his report upon the trade and shipping of Constantza during 1906. At the outset he points out that the year stands out as a record in Roumanian trade, while the figures of shipping shew that there was an increase of 10 per cent. when compared with the shipping statistics for 1905. The employment of British oil-tank steamers joined in the general increase, the number of tankers clearing being 36, as against 25 in 1905 - a very satisfactory increase.

The total exports of petroleum from Roumania and their value during the past two years were as follows:—

Description.	1905.			1906.		
	Quantity. Tons.	Value per 100 kilos.		Quantity. Tons.	Value per 100 kilos.	
		s.	d.		s.	d.
Petroleum—						
Crude and distilled	49,515	3	7	53,374	4	0
„ refined	118,134	5	9	196,631	5	9
Benzine	46,699	6	8	71,114	11	2
Total	214,348			321,119		
Total Value ..	£578,680			£1,055,560		

Of these amounts the following were exported *via* Constantza:—

Description.	Quantity.	
	1905. Tons.	1906. Tons.
Petroleum—		
Crude and distilled	17,725	25,525
„ refined	88,292	177,624
Benzine	22,605	40,143
Total	128,622	243,292

Of the petroleum exports from Constantza, France took 68,800 tons, England coming second with 48,440 tons. Turkey took 33,331 tons, and Germany 9,260 tons, Italy coming in for 9,233 tons. The remaining petroleum exports from Constantza were distributed as follows:—Belgium, 4,090 tons; the Netherlands, 3,300 tons; and Austria-Hungary, 899 tons.

In addition to the existing sixteen petroleum reservoirs, each of which holds 5,000 cubic metres of oil, five more are to be built in the harbour, so that the total storage capacity will be 105,000 cubic metres. It is due to this enterprise of the Government that 76 per cent. of all exports during 1906 passed through Constantza. Of the remainder 8 per cent. left *via* Braila, 8 per cent. *via* Giurgin, and 5 per cent. *via* Predeal. Of the 36 British tank steamers employed in transport from Constantza eleven cleared for Havre and Rouen, ten for Dover for orders, six for London and Hull, five for Cette, and one each for Liverpool, Bordeaux, Barrow and Dublin.

The existing harbour plant only permits of two oil steamers being loaded at one time, but it will shortly be doubled. The completed sixteen reservoirs are State property, but are leased to private companies at £320

per reservoir per annum, viz., four to the Steaua Romana, three each to the Vega and Romano-American companies, and two each to the Aurora, Aquila Franco-Romana and Trajan companies. In addition to the foregoing there are twelve private reservoirs in the immediate neighbourhood owned by the Steaua Romana, six by the Aquila Franco-Romana, and several others by the Romano-American Co. The latter are all connected by pipe lines with the harbour State reservoirs, through which all oil for export must be passed in accordance with the Roumanian oil monopoly regulations. The oil reaches Constantza direct from the refineries in tank waggons by rail, Ploesti-Constantza in 18 to 20 hours, when it is pumped direct into the private and State reservoirs. In the latter case it runs by gravitation into three sunken reservoirs, each of a capacity of 204 cubic metres, one being reserved for the so-called “black goods” (for French artificial oil), one for raw benzine, and one for refined oil.

The percentage of all sorts of oil taken by foreign countries was:—United Kingdom, 28½ per cent.; France, 27 per cent.; Germany, 11 per cent.; Turkey, 7 per cent.; Austria-Hungary, 5 per cent.; and Bulgaria, Servia and Norway together, 3 per cent.

The critical question of the moment is the improvement and extension of transport facilities. It has been estimated that the State railway alterations demanded would need at least £4,000,000, whilst a pipe line from the chief oil fields at Campina, a distance of 218 miles, could be made at an expense only of £400,000. It is therefore probable that the cheaper alternative will be adopted in the near future, for this through pipe line would be of immense advantage.

The completed work forms three sides of an irregular parallelogram, the eastern side of which is a strong breakwater wall 1,377 metres in length, well protected by cement blocks on the outside and terminated by an efficient lighthouse. The entrance to the harbour runs from east to west at a distance of 977 metres along same, leaving an exterior extension wall 400 metres in length, ending in a plateau 20 by 18 metres supporting the lighthouse. For a distance of 530 metres this breakwater is topped by a protective wall 7¾ metres in height, forming with the southern mole an efficient right-angled protection to the inner harbour, the entrance to which has a width of 160 to 170 metres. The transverse mole guarding the southern side is 1,506 metres in length, with a breadth at its sea base of 22½ metres, at the water surface 7½ metres, and at the top of the wall 2½ metres. The completed eastern and northern quays already afford accommodation for about 30 large steamers. The average depth at the quay is 26 feet. The total quay length when the improvements are completed will be over 7,000 metres, of which 945 metres will be in the petroleum harbour.

THE BAKU RUSSIAN PETROLEUM COMPANY'S REPORT FOR 1906.

A DEPLORABLE STATE OF AFFAIRS.

The directors' report which was presented to the annual meeting of shareholders of the Baku Russian Petroleum Co., on Wednesday, and which was so largely responsible for the lively nature of the proceedings, a report of which appears elsewhere in this issue, reads as follow:—

Your directors herewith submit their annual report and statement of accounts for the year ending 31st December, 1906 (o.s.).

The production of crude oil was again greatly interfered with by strikes, the gross output amounting to 11,550,554 poods, as compared with 15,728,253 poods obtained in 1905. Altogether the wells were stopped for two months.

Good progress was made at the new wells, 2,805 sageses being bored. A considerable proportion of this boring was in wells which had not come on the production list in 1906, consequently the benefit of this heavy expenditure had not yet been obtained when these accounts closed.

The balance to the credit of profit and loss account for the year 1906, before charging depreciation, is £1,273 11s.

The board consider it necessary to remind the shareholders that as the majority of the present board were only appointed in July, 1906, neither they nor the present managers at Baku, appointed in December, 1906, can be considered responsible for the result of last year's working, which depended mainly on the prices obtained for the crude oil under contracts made in 1905. Moreover, a serious strike lasting two months occurred very shortly after the new directors were appointed, involving the company in further difficulties owing to the entire cessation of production during that period.

In consequence of the strikes the deliveries under the above contracts were only completed in February, 1907.

The following statement of the position of the company in 1905 which led up to the contracts of 1905, and the reasons that induced the board at that time to make the sales, may assist the shareholders to understand the position.

In August, 1904, at the time the management was changed, two large contracts were running for forward delivery of the greater part of the company's production, which could not be terminated before the 31st December, 1904. Both these contracts were completed at a very heavy loss, and at the end of 1904 the debit balance on profit and loss account stood at £168,142 17s. 6d. These figures were arrived at as follows:—

	£	s.	d.
30th September, 1902	34,240	6	5
31st December, 1903	82,456	13	3
31st December, 1904	51,445	17	10
	£168,142	17	6

The accounts shew that on the 31st December, 1904, the net liabilities were as follows:—Loans, £125,000; sundry creditors, £87,890; and bills payable, £73,000; less—cash, bills, book debts, and stock on hand, £39,808; shewing a financial deficiency of £246,082.

The forward contracts referred to above were:—

1. A working arrangement with the Russian Petroleum Co., under which the Baku Co. supplied a large portion of its crude oil for refining and distributing. Unsatisfactory prices were realised under this contract for the refined products. A small quantity of the refined oil was supplied to the Consolidated Petroleum Co., Ltd., for the United Kingdom market, in the second half of 1904, but the bulk of the products were marketed in Russia.
2. The second contract was for the supply of 4,000,000 poods of crude oil to Mr. Benenson at 10 copecs per pood from November, 1903, to November, 1904.

On the termination of these agreements it was decided that the company should devote itself in the future to the production and sale of crude oil only, and during the first half of 1905 remunerative prices were obtained. The accounts for the first seven months of 1905 shewed a clear profit on working, with crude oil at 15 to 16 copecs per pood.

In order to pay for the liabilities incurred by the former management, and also to provide funds for the further development of the property, the board decided in June, 1905, to make forward sales, provided a price could be obtained, which would shew a satisfactory profit.

These forward sales, which were for delivery over sixteen months, were made after the most careful consideration of the situation as it then was, and the prices, viz., 17 to 17½ copecs per pood, promised

a large prospective profit. Advances (or handmoney) were received on these sales.

The following extracts from the official bulletins at that time will shew that the company contracted at the full market price for forward sales:—

1905—		Copecs.
May, Runo sold to Nobels	9,000,000 poods at 17	
June, Aramazd Co. sold to Nobels ..	9,000,000 ..	17
„ Nepht Co. sold to Lianosoff ..	2,300,000 ..	17½
July, Naphthalan Co. sold to M. Nagieff	2,400,000 ..	17½
Aug., Bakht Co. sold to Saroukhanoff	1,200,000 ..	17
„ Baku Naphtha Co. sold to Nobels	6,000,000 ..	18

The company's contracts would undoubtedly have proved remunerative and the advances (or handmoney) would have enabled the board to meet some of the heavy liabilities, had not the disastrous disturbances and fires of August, 1905, completely altered the situation.

Instead of paying debts, the board had suddenly to spend every penny they could get together on replacing burnt derricks and machinery, and restarting the business, and the only available sum was the advance or handmoney received on the forward sales, and which money, fortunately, was still available.

The fires and disturbances, the continued labour troubles and the increased wages and cost of materials together with the reduction in output added greatly to the cost per pood of production, with the result that the prospective profit on these forward sales was not realised. At the same time, it must not be lost sight of that this large sum of money, being immediately available for restoration of the property, saved the situation.

The board were fortunately able, after prolonged negotiations, to rearrange the terms of these forward sales, cancelling a large proportion.

At the general meeting held in December, 1905, a committee of shareholders was appointed to enquire into the position of the company. This committee had full access to all the company's records, and numerous witnesses were called before it, including some of the directors. The committee issued a report to the shareholders on promotion, working capital, sale of refineries, enterprises, commissions, directors, management of the company, and general matters.

In July, 1906, five more new directors were appointed to the board; one, Mr. Drew, being the chairman of the committee of shareholders referred to above. Two (Mr. Watson and Mr. Booth) were nominated by a committee formed by certain gentlemen who had been leading an agitation against the board, and the remaining two new directors, Mr. Wimble and Mr. Barber, were nominated by large shareholders.

The board is therefore practically a new one, five out of seven having had no previous connection with the company in any way except as shareholders, and the present report, balance sheet and profit and loss account deal mainly with matters that took place before they took office.

The new board have given special attention to the development of the property to improve the production, as the following table shews:—

1905 (fires and riots), only 1,310 sageses bored; 1906, 2,805 sageses bored; and 1907 (eight months), at the rate of 2,955 sageses bored.

The number of wells now working, compared with the number working at the beginning and end of the year under review is as follows:—

	Jan., 1906.	Jan., 1907.	Jan., 1907.
Wells producing	36	41	45
Wells boring, deepening or repairing	11	27	27
	47	68	72

Since the termination in February, 1907, of the deliveries under the 1905 contracts, the company's production has been disposed of at good prices either by small forward sales or by spot sales for prompt delivery, with the result that, notwithstanding the good prices have only been obtained for four months, the working for the first half of 1907 shews a gross profit of, approximately, £33,000.

The average general market price at Baku for deliveries made during the half year, as fixed by the Special Government Committee, was 25½ copecs per pood.

THE OIL FIELD OF SUMMERLAND.

A New . .
Geological
Survey . .
Report . .



WHERE OIL WELLS ARE DRILLED UNDER THE SEA.

The latest report of the United States Geological Survey, which is shortly to be issued, deals with that highly-interesting oil-producing district of Summerland, where wells are put down from wharves extending far out into the Pacific Ocean. The report is of considerable length, and goes thoroughly into the subject under treatment. Mr. Ralph Arnold, who has been responsible for the report, points out at the outset that the Summerland oil district is situated in Santa Barbara county on the coast of California, between 80 and 90 miles west north-west of Los Angeles and about 350 miles south-east of San Francisco. It includes at its west end the city of Santa Barbara, one of the oldest settlements in California. The district is reached by the coast division of the Southern Pacific Railroad and by vessels which touch at the port of Santa Barbara. The town of Summerland, at which the only productive oil field so far developed in the district is situated, lies nearly six miles east of Santa Barbara.

The oil wells in the Summerland field are put down on the terrace upon which the town is situated, on the beach in front of this terrace, and on wharves which extend out into the ocean, some of them nearly a quarter of a mile. The wells range in depth from 100 to more than 600 feet, the shallowest being the northernmost on the terrace, the deepest those farthest south of the wharves. The oil is obtained from sands alternating with clay beds in the Fernando formation (upper Miocene or lower Pliocene), which dips almost due south at angles ranging from nearly 90 degrees at the north end of the field to nearly horizontal at the south end. Only one productive sand, from 10 to 45 feet thick, is penetrated by the terrace wells, but in the wharf wells two, and in some three, oil sands occur.

For convenience in discussion the field has been divided into the following sections:—Area west of Lookout Park, area north of the railroad, area between the railroad and the beach, and wells on the beach and wharves.

Area west of Lookout Park.—The wells in the area west of Lookout Park penetrate the steeply dipping or disturbed beds flanking the Summerland anticline and fault. Several oil sands are penetrated by some of the wells, but only one or two are productive. The productive beds are from 10 to 52 feet thick in the wells, and are separated by clay, which varies materially in thickness from well to well.

All the wells in this area are drilled, the casing used being four and one-half inches or a little larger. Productive sands are encountered at depths ranging from about 170 to 385 feet, the latter figure being in the Williams well on Ortega Hill.

The production ranges from something less than one barrel to two or three barrels a day, but the initial production for some of the wells is said to have been greater. The average for the Potomac group was in 1902, about one and one-quarter barrels a day each, and it has fallen off but little in the last five years.

The specific gravity of the oil averages about 15 degrees, varying but slightly above or below this figure. The oil is fairly free from water when the wells are first drilled, but with the lapse of time the proportion of water increases. In 1902 the Potomac wells were yielding 1 to 4 per cent. of water and 1 to 2 per cent. of sludge with the oil.

Among the companies and individuals who have operated in this area are H. L. Williams, Potomac Oil Co., Roberson Oil Co., Churchill Oil Co., Larsen Oil Co., Seaside Oil Co., and Miller Oil Co.

Area north of the railroad.—The oil and gas wells north of the railroad after passing through the Pleistocene, penetrate the beds near the base of the Fernando, which dip at a rather low angle to the south. Beneath the Monterey-Fernando unconformity, the Monterey beds probably dip steeply southward, as they do in the hills north-west of Summerland. Some of the drillers, however, have reported steep northerly dips (probably due to local overturning of the beds) in some of the wells in the shale. The Fernando beds dip very gently southward, but thin rapidly toward the north, the oil sand decreasing from 25 to 12 feet within 200 or 300 feet.

The wells logs indicate from 10 to 25 feet of soil, sand and gravel (probably Pleistocene); 60 to 120 feet of fine sands and blue clays, with a persistent layer of blue clay at the bottom, and 12 to 25 feet of oil sand, the top of which is penetrated at depths of 70 to 145 feet.

With the exception of the Cole dug well, all the wells in this section of the field of which there is any record are drilled, the casing usually being four and one-half inches in diameter.

When the sand was first tapped the production of the wells ranged from one to as high as twelve barrels a day for some of the wells in the central part of the area, but the average at any time was never over three or four barrels. The Cole dug well, at the extreme east end of the productive territory, four feet in diameter and 90 feet deep, yielded but three barrels a day. The group of twelve Doulton and Wilson wells in the central part of the area are said to have averaged ten barrels a day each in 1895, but fell off to six barrels each by July, 1895.

The following are among the companies or individuals who have operated wells in the area north of the railroad: Alameda and Santa Barbara Development Co., Eureka Consolidated Oil Co., Stevens and Roberts, Doulton and Wilson, Bachus and Cravens, Loomis Oil Co., Dewlaney Oil Co., Cole Oil Co., Wakham Oil Co., Goodnow Oil Co., Williams and Easton, Turner and Darling.

Area between the railroad and the beach.—The conditions in the area between the railroad and the beach are a southward continuation of those found north of the railroad. The terrace on which the wells are sunk averages between 25 and 30 feet above sea level, and is underlain by Pleistocene beds which dip gently northward at the west end of the field, but lie flat farther east. Beneath the Pleistocene the Fernando beds shew dips ranging from 70 to 80 degs. s., in the region above Lookout Park to 22 degs. s. in the territory of the Seaside Oil Co., 400 or 500 feet farther south, and finally to practically horizontal in the eastern part of the field. The wells first penetrate 10 to 20 feet of fine sand, and five to ten feet of sand and cobblestones, probably Pleistocene in age. These beds are followed by 150 to 170 feet of sand, with clay and some gravel, a persistent clay bed occurring at the bottom. The oil sand is encountered below the clay bed. It is 30 to 45 feet thick, and underlain by clay. The oil sand becomes unproductive in the region a short distance north-east of the shore end of the Oxnard wharf, the eastern of two adjacent wells located here being entirely unproductive, while the western one yielded a little oil.

The wells in this area are all drilled. They range from about 150 to 240 feet in depth, and penetrate the oil sand at 125 to more than 200 feet.

In their prime the wells produced as high as 15 barrels a day each, but the average was probably never more than three to five barrels. One group of wells which produced from six to ten barrels a day each when first pumped, soon dropped to a daily average of about three barrels, which was held for two years. One of the Wilson wells (No. 2), which had an initial flow of only three or four barrels a day, suddenly rose to a production of 15 barrels a day soon after it started, and kept this up for over a year and a-half, although the adjacent wells never averaged over two or three barrels a day each. It seems likely that this particularly good producer must have penetrated a rich crevice or locally extremely porous place in the oil-bearing bed. A group of wells opposite the Lillis wharf and south of the railroad, increased in production when the wells opposite them across the track were abandoned.

The gravity of the oil ranges from 12 to 15½° B., the lightest oil coming from the wells at the east end of the field. The average gravity for the entire area is probably about 13 degrees. It is thought that the water which is pumped in varying amounts with the oil has had a deleterious effect on its gravity, those wells producing the lightest oil pumping the least water. Traces of sludge accompany the oil and water in some of the wells.

Among the companies and individuals who are now operating or have operated in this area are the following:—Alameda and Santa Barbara Development Co., Doulton and Wilson, Forester and Treadwell, W. M. S. Moore, Seaside Oil Co., J. C. Wilson, California Oil Co., Miller and Williams, Roberson Oil Co., and Packard Oil Co.

Beach and Wharf Wells.—The formations penetrated by the beach and the wharf wells are similar to these found in areas to the north, except that the Pleistocene is lacking, and in its place is a veneer of beach sand from two to five feet in thickness, covering the Fernando sandstones, shales and clays. With the exception of three dug wells on the beach at the north end of the area, all of the wells are drilled, the casing used ranging in diameter from about four and one-half to twelve inches. In drilling beneath the water,

a casing larger than that needed for the drill hole is put down to the floor of the ocean, and forced into the bed rock until the ocean water is securely shut out of the drill hole. This is called a conductor, and the casing of the well is put down inside of the conductor. The main oil sand is penetrated in the wells at depths of 125 to about 325 feet. The range of depths for the different wharves is as follows: Eastern Duquesne, 160 to 315 feet; Western Duquesne, 200 to 325 feet; Sea Cliff, 125 to 200 feet; Oxnard, 125 to 290 feet; Treadwell (Southern Pacific Co.), 200 to 250 feet; North Star, 5 to 350 feet; and Becker, 5 to 310 feet.

The individual production of the drill wells varies from a fraction of a barrel to that of one of the Duquesne wells, which is said to have had an initial production of 100 barrels a day. It is claimed that this well continued this production, which is phenomenal for this field, for six months, but finally fell off to an average of three or four barrels a day. The general average for the wharf wells at the present time is between one and two barrels a day each; this is probably less than one-half the average for the field when it was in its prime.

Of the dug wells, the best producer was a 60 foot hole, in the bottom of which was sunk 17 feet of nine and five-eighth-inch casing. This is said to have been capable of producing 100 barrels a day at one time. The other dug wells yielded three to ten barrels a day each.

The oil obtained from the wharf and beach wells ranges in colour from black to olive-brown, the latter being the lighter, and in gravity from 12 to 18 degrees, with an average of 15° B. The heaviest oil comes from the main oil sand in the beach wells throughout the central part of the area; the 14 to 15 degrees oil from the same sand in the great majority of the wharf wells; the 16 degrees oil largely from the second or B sand; the 17 to 17½ degrees oil from the "oil rock" below the main oil sand in the eastern part of the field; and the oil, which is said to have tested 18 degrees, from Williams, No. 2 well, in the highly-tilted beds at the extreme west end of the field. Certain wells on the beach and edge of the bluff, between the Becker and Treadwell wharves, are said to have been abandoned because the sand yielded liquid asphaltum too heavy to pump. Similar asphaltum is also reported in sand A, at the bottom of North Star No. 8, although the oil in the same stratum less than 100 feet farther north, up the dip, was reported as of 15 degrees gravity.

The companies which have at one time or another operated the beach and wharf wells, named in the order of the wells from east to west, are the Duquesne (Keith and Williams wharves), Southern Pacific, Sea Cliff, Oxnard, Lillis, Sunset, W. M. S. Moore, Treadwell (Southern Pacific Co.), Marine, Knapp, McCall, Santa Barbara Oil and Mining, North Star, Becker and Williams.

It must be continually borne in mind that absolute determination of the possibilities of occurrence and non-occurrence of oil in any one locality, by work on the surface, even when augmented by a study of the known conditions in developed territory, is not possible. The best that can be done is to calculate the degree of probability on the basis of a summation of indications and structural conditions. The following conclusions concerning the prospects of the Summerland district are offered simply as the personal opinion of the writer, after a study of this district.

As regards the region immediately about Summerland, it is quite evident that the limits of the productive territory for wells of moderate depth, say up to 600 feet, have been pretty well outlined. The question for this territory seems to be more one of transportation facilities, markets, and co-operation among the operators than of unknown possibilities of development. There is certainly considerable territory between the Becker and Duquesne wharves, not to mention other undrilled territory in the northern part of the field, that should yield good returns for the cost and care of wells if the price of oil was what it was a few years ago. Until the price rises or until cheaper transportation rates are obtained, however, it seems useless to carry on further development.

The conditions of structure do not appear to favour the probability of striking remunerative deposits of oil by deep drilling. It is true that oil would probably be encountered in wells 2,000 or more feet in depth, put down almost anywhere over the territory underlain by the Monterey shale, but the steep dips and close texture of the shale apparently preclude the accumulation of such great deposits of oil as are found in fields where the rocks are less steeply inclined and more porous.

The last paragraph is as applicable to the region about Carpinteria and to the east as far as the contorted condition of the shale extends as it is to that territory which is underlain by the Monterey. More or less oil is enclosed in the shale and in local interbedded sandstones, but it does not appear likely that heavy producers will ever be encountered in a region of such distortion and fracturing as is prevalent in the Monterey shale all along this part of the

coast, although in certain facies of the shale fracturing seems to be essential to the migration of the oil within or through it.

It is thought that wells sunk deep enough to penetrate the basal beds of the Fernando formation in the region of the Montecito anticline, which extends indefinitely west northward from the coast one mile west of Montecito Landing, will strike deposits of oil of about the same quality as the best of that encountered at Summerland.

In the light of the development which has already taken place in Toro, Oil, Santa Monica, and Arroyo Parida canyons, it seems almost certain that the light producers (averaging from two to six or eight barrels a day of 14 to 18 degs. oil), 1,000 feet or less in depth, could be put down at many places along the contact between the Topatopa and Sespe formations in the region north-east of Summerland. The oil-bearing strata in both of these belts are apparently confined to the upper part of the Topatopa, and to obtain productive wells is simply a question of locating places where the structure appears most advantageous for the accumulation of the petroleum. The region near the Arroyo Parida fault, toward the east end of the area covered by the map, appears promising, although the wells here, especially on the north side of the fault, would have to go much deeper to strike the oil zone than they do at the tested localities.

Nearly all of the oil in the Summerland field is dark brown or black. The exceptions to this are the olive-brown oil from some of the Becker and Potomac wells, at the north end of the field, and a heavy dark green oil from the Fischer dug well, near Loon Point. The oil from the wells penetrating the Monterey shale (middle Miocene), in the vicinity of Carpinteria and farther east is black, as is also that from the Occidental wells sunk in the Topatopa formation (Eocene) in Toro Canyon. An amber coloured petroleum is reported from the Santa Monica Oil Company's well in the Topatopa sandstone, north of Carpinteria.

The specific gravity of the oil from the Summerland field ranges from nine to 18° B., the average being between 14 and 15 degs. The Summerland oil and that from certain portions of the Los Angeles district are the heaviest of the California oils. The oil from the Monterey shale in the region about Carpinteria and Rincon ranges from liquid asphalt (gravity about 9° B.), to the 20 deg. petroleum from the Rincon well. It is claimed that oil of 37 deg. gravity is found in the Columbia Oil and Asphalt Company's well at Carpinteria, but none of this light oil was seen by the writer. The gravity of the oil from the Occidental wells (in the Topatopa formation) is said to be 17 degs. when it first comes from the wells, but to fall soon to 14 degs. on exposure to the air. The same formation yields 18 degs. oil in the Santa Monica well north of Carpinteria.

The lightest oil in the Summerland field is found in the main sand in the beds of steepest dip at the north end of the field; in proximity to the local anticline or fault in the Potomac wells, also at the north end; in the Miller and Williams wells near the axis of the Loon Point anticline, at the east end; and in the second and third sands in the region of the Duquesne wharves. The heaviest oil comes from some of the beach and bluff wells between the North Star and Treadwell wharves. In general, the oil in any bed improves in quality down the dip, although in the Sea Cliff wells the opposite is said to be true. Water in the wells south of the railroad is believed to account for the lower gravity of the oil from this area, as compared to that from the almost water-free oil sands north of the track.

The most prominent characteristics of the Summerland oil are its low gravity (12 to 16° B.), its high percentage of asphalt (85.5 per cent., the highest of all the California oils), its relatively high percentage of nitrogen (1.25 per cent.), and its moderately low sulphur content (0.84 per cent.).

The Sixth International Motor Exhibition of the Society of Motor Manufacturers and Traders, Ltd., to be opened at Olympia on Monday next by H.R.H. the Duke of Connaught, will include interesting exhibits of a varied character.

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The South Eastern and Chatham Railway desire us to draw attention to the fact that for the Paris Automobile Show, cheap return tickets, available for 14 days, will be issued on Fridays and Saturdays, November 8th and 9th, 15th and 16th, 22nd and 23rd, and 29th and 30th, at the fares of 58s. 4d. first, 37s. 6d. second, and 30s. third class. These tickets will be available from London by the 10 a.m. turbine steamer service via Folkestone-Boulogne, or by the 9 p.m. mail express service via Dover-Calais. Similar bookings will be in force from Paris to London for the use of French visitors to the Olympia Show.

BUSTENARI AND ITS PETROLEUM.

AN INTERESTING CHAPTER FROM DR. EDELEANU'S RECENT PUBLICATION.

The principal oil field in Roumania—Bustenari—comes in for prominent notice by Dr. Edeleanu, in his latest work upon the petroleums of Roumania. The author, in dealing with this field, points out, as shewing its importance, that its production last year was 509,995 tons, this being obtained from 280 productive boreholes and 151 hand-dug wells. The most important companies operating in this field, which lies, by-the-bye, to the east of Campina, are the Steaua Romana, the International Co., the Concordia Co. (formed, as our readers will be aware, by the fusion of the Bustenari and Sylvia Companies), the Romano-American (at Mislisoara, which is included in the Bustenari field), the Aquila Franco-Romana and others. It can be taken that approximately the proportion of the boreholes to the productive hand wells to-day are two to one. The depth of these hand wells is between 120 and 190 metres, while that of the boreholes is from 120 to 305 metres. At this relatively shallow depth, the petroliferous horizon is very rich in crude oil. A great many of the productive hand wells at this depth produce as much as 10 tons daily, while the bored wells, after the eruptions have ceased, settle down to a steady production of about 20 tons daily. There are, of course, many exceptions. Some four and a-half years ago, well No. 36 of the Steaua Romana at Mislisoara reached the petroliferous horizon at a depth of 136 metres, and produced no less than 180 tons per day for many weeks, while well No. 41 of the same company, situated at Faget, which spouted in May, 1902, produced in a single year more than 10,000 tons of oil.

The crude oil from the Bustenari field has a dark olive colour and an etherial smell, being distinguished from that of Campina by the almost total absence of paraffin. The crude oil from the hand wells, and also the borings, presents a great uniformity of physical character. With the one exception of the oil from well No. 76 of the Steaua Romana at Croitoru which has a specific gravity of 0.880, all that from the hand and bored wells, whether from Graushor or Mislisoara, produce oils with specific gravities of 0.845 to 0.865, the viscosity being between 1.2 and 1.4.

With reference to the products received by distillation, the benzines distilling below 150° C. are in greater

quantity in the Bustenari oil than in that of Campina, and their proportion varies between 26 per cent. and 30 per cent., while in some it reaches as much as 35 per cent. On the other hand, the distillates coming over between 150° C. and 300° C. are smaller in quantity and represent generally about 30 per cent.

The residue above 300° C. contains but little paraffin, and varies on the average between 39 per cent. and 42 per cent. The specific gravities of the light benzines distilling below 150° C. are between 0.720 and 0.740, and by the redistillation of the fractions up to 150° C., from 15 to 20 per cent. of benzine of a specific gravity of 0.717 is obtained. This benzine contains nearly two-thirds of etherial oils which distill below 100° C. The author here remarks that below the temperature of 70° C. the different fractions of the Bustenari benzine have specific gravities smaller than the corresponding fractions of the Campina benzines. Between 70 and 100 degrees C. the specific gravities of corresponding fractions are almost equal, but beyond 100° they become higher than those of Campina. This difference is greater, the higher the fractions are. The following serves as an example of fractions distilling between 250 and 260° C., and between 290 and 300° C. : —

Fraction.	Spec. Grav. at 15° C.
	Campina. Bustenari.
250°—260° C.	0.833 0.862
290°—300° C.	0.842 0.888

The distillate between 150° and 300° C. represents 30 per cent. of the crude oil, but unlike that from Campina it has a very high specific gravity varying between 0.835 and 0.845, and for this reason the distillate between these limits of temperature does not give a kerosene with satisfactory properties.

The fraction that gives a good quality of kerosene is comprised between much narrower limits of temperature, and the upper limit at which can be incorporated a lamp oil distillate should not exceed 270° C. Thus, from a crude oil with a specific gravity of 0.846 by separating the distillate between 130° C. and 260° C., which represents 32 per cent., a kerosene with a specific gravity of 0.808, a viscosity of 0.98 and a flash point of 24° C. (75.2° F.) is obtained.

Dr. Edeleanu adds that from the above observations it will be seen that the kerosene from the Bustenari oil is inferior to that of Campina, both as regards quality and quantity. The residue has a dark brown colour, it contains very little paraffin, and submitted to distillation under reduced pressure (250-300 mm.) it gives an oil that contains only 2 per cent. paraffin.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO NOVEMBER 4th, 1907.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Oct. 21.	From Jan. 1.	Since Oct. 21.	From Jan. 1.	Since Oct. 21.	From Jan. 1.	Since Oct. 21.	From Jan. 1.	Since Oct. 21.	From Jan. 1.	Since Oct. 21.	From Jan. 1.	Since Oct. 21.	From Jan. 1.	Since Oct. 21.	From Jan. 1.
Austria ...	—	—	—	79,580	—	67,770	—	—	—	—	—	—	—	—	—	147,350
Belgium ...	—	153,410	23,900	603,305	—	—	—	310	—	4,000	—	—	860	23,900	761,885	8,800
Canada ...	—	—	—	—	—	8,800	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	—	—	—	—	—	—	—	1,493,110	21,139,320	—	—	—	—	1,493,110	21,139,320
Germany ...	1,440,660	2,736,835	30,030	1,235,460	—	2,000	—	—	—	80	—	—	4,900	1,470,690	3,979,275	3,150
Holland ...	—	1,070	750	15,900	—	—	—	—	—	537,420	—	—	2,400	114,230	3,150	668,620
Roumania ...	963,200	6,709,290	—	—	—	—	2,135,500	7,295,090	—	1,459,000	—	238,700	—	—	3,100,700	15,702,080
Russia ...	—	26,889,200	6,070	3,800,200	—	125,960	—	837,040	—	12,690	—	—	—	1,423,780	6,070	33,138,870
U.S.A. ...	2,552,250	85,146,310	1,743,470	34,520,485	—	854,660	2,871,330	44,270,430	—	4,889,440	—	5,677,570	9,480	1,791,760	6,992,530	177,150,655
Other Countries	—	950	4,840	73,925	—	4,760	—	—	—	2,500	—	40	22,130	139,920	26,970	227,095
	4,953,110	121,637,065	1,809,060	40,333,855	—	1,063,950	4,822,830	52,452,870	1,493,110	28,044,450	—	5,916,310	34,010	3,475,450	13,117,120	252,923,950

AMERICAN NOTES

Natural Gas in Manitoba.—Natural gas is reported to have been struck four miles north of Grenfell, Manitoba.

Is It Another Field?—Rumours of rich oil fields in Door county, Wis., have lately been revived by the discovery of oil while a well was being drilled at Sturgeon Bay.

Wyoming Developments.—It is stated that the Wyoming Oil and Development Co. is to build a refinery at Fetterman siding, west of Douglas, and will pipe crude oil from the fields in Brenning basin to the refinery.

In the Illinois Field.—The production of the Illinois field is on the increase, several gushers having been lately drilled in. During the third week of October the new production alone amounted to over 10,000 barrels. Much development work is now proceeding.

California Oilfields, Ltd.—According to latest information, this successful English concern operating in the east side of the Coalinga field has now 55 wells producing. A dozen wells are at present being drilled and one old well is being deepened. On the west side of the field, the same company has a couple of producing wells.

Kern River Activity.—Like every other part of California, Kern River field is enjoying a run of activity. The production for September is placed at 840,000 barrels, this being obtained from 1,235 wells. During the month the shipments were 1,200,000 barrels. On the first of October, the whole storages in the field contained about 13,000,000 barrels.

An Oil Boom.—The latest issue of the *Pacific Mining and Oil Reporter* states that the Californian oil fields are at present booming. The price of oil has recently increased, and owing to the great demand now being experienced, stocks are being drawn upon to a great extent. Sixty cents per barrel for Coalinga oil is said to be refused on contracts covering a period of six months.

Important Property Transfer.—The Empire Oil and Development Co., recently organised in New York, has taken over the entire holding of the Midway Oil Co. and the Oriental Oil Co., these combined properties comprising 2,720 acres in the Midway field, and 9,000 acres of prospective land in San Benito county. The new concern, which shortly intends to build a pipe line for itself to Port Harford, has a capitalisation of \$10,000,000.

Suggested Regulations for California.—The question of providing regulations for the Government oil lands of California is now receiving attention. The Petroleum Products Committee of the Los Angeles Chamber of Mines has been considering the matter, and has expressed its opinion that there should be some absolute and specific method of locating a piece of Government oil land. The committee recommends that 160 acres of land shall be constituted an oil claim, and that one individual be allowed to locate that amount of land, but with a specific proviso that he is to begin active development within 90 days. When a discovery of oil has been made the operator shall be entitled to make his application to the Government for deed to the land under the present regulations.

BATOU M PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended October 13th o.s., (in poods):—

	Illuminating Oil.		Other Products.	
	1906.	1907.	1906.	1907.
To Europe ..	—	383,000	1,000	280,000
To the East ..	294,000	311,000	1,000	1,000
To Russian Ports.	1,000	3,000	12,000	2,000
From 1st Jan. to 13th Oct. :—				
To Europe ..	10,169,000	12,916,000	6,340,000	8,493,000
To the East ..	5,627,000	9,355,000	47,000	321,000
To Russian Ports	2,367,000	1,797,000	200,000	149,000

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR SEPTEMBER.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during September were as under:—

			1906. Quantities. Gallons.			1907. Quantities. Gallons.
CRUDE—						
Baltimore	..	..	—	..	..	—
Boston and Charlestown			—	..	..	—
Delaware	..	..	—	..	..	—
New York	..	..	2,701	..	..	—
Philadelphia	..	..	4,746,929	..	..	8,993,612
Galveston and Sabine	..		—	..	..	894,348
Total	..	..	4,749,610	Total	..	9,887,960
Total value for the month, 1906..				..	..	\$274,589
"	"	"	1907..	..	..	\$612,269
NAPHTHAS—						
Baltimore	..	..	—	..	..	—
Boston and Charlestown			—	..	..	—
Delaware	..	..	—	..	..	—
New York	..	..	467,781	..	..	1,760,761
Philadelphia	..	..	409,000	..	..	522,135
Galveston	..	..	—	..	..	—
Total	..	..	876,781	Total	..	2,282,896
Total value for the month, 1905 ..				..	..	\$91,205
"	"	"	1907 ..	..	..	\$235,186
ILLUMINATING—						
Baltimore	..	..	3,282	..	..	—
Boston and Charlestown			5,158	..	..	9,916
Delaware	..	..	—	..	..	—
New York	..	..	45,411,787	..	..	39,842,829
Philadelphia	..	..	29,998,656	..	..	25,819,282
Galveston	..	..	972,486	..	..	1,700,000
Total	..	..	76,391,369	Total	..	67,372,027
Total value for the month, 1906 ..				..	..	\$4,701,409
"	"	"	1907	..	..	\$4,517,024
LUBRICATING—						
Baltimore	..	..	475,477	..	..	316,500
Boston and Charlestown			15,144	..	..	18,564
Delaware	..	..	—	..	..	—
New York	..	..	6,812,735	..	..	8,264,989
Philadelphia	..	..	5,230,815	..	..	2,812,202
Galveston	..	..	673,141	..	..	4,000
Total	..	..	13,207,312	Total	..	11,416,255
Total value for the month, 1906 ..				..	..	\$1,490,483
"	"	"	1907	..	..	\$1,483,038
RESIDUUM—						
Baltimore	..	..	—	..	..	—
Boston and Charlestown			359,000	..	..	—
Delaware	..	..	—	..	..	—
New York	..	..	—	..	..	—
Philadelphia	..	..	1,627,247	..	..	4,136,266
Galveston	..	..	919,243	..	..	2,000,000
Total	..	..	2,905,490	Total	..	6,136,266
Total value for the month, 1906 ..				..	..	\$90,327
"	"	"	1907	..	..	\$213,372
TOTAL MINERAL OILS—						
Baltimore	..	..	478,759	..	..	316,500
Boston and Charlestown			20,302	..	..	28,480
Delaware	..	..	—	..	..	—
New York	..	..	53,054,004	..	..	49,868,579
Philadelphia	..	..	42,012,627	..	..	42,283,497
Galveston	..	..	2,564,870	..	..	4,598,348
Total	..	..	98,130,562	Total	..	97,095,404
Total value for the month, 1906 ..				..	..	\$6,648,013
"	"	"	1907	..	..	\$7,060,889

Competition in Roumania.—Severe competition is now in progress in the sale of illuminating oil on the Roumanian home market between the Romano-American Co and the refiners' cartel, headed by the Steaua Romana. The selling organisation of the cartel is under the sole control of the Steaua Romana, and it was owing to the refusal of the Steaua Romana to renounce the exclusive control of the installations that the Romano-American Co. declined to join the cartel. The price of illuminating oil has now gone down to 6-7 francs per 100 kilos., against the 12 francs which was the price a year ago.

THE CHEMISTRY OF CALIFORNIA PETROLEUM.

A CHAPTER PUBLISHED BY THE CALIFORNIA STATE MINING BUREAU IN ITS BOOK UPON THE
"PRODUCTION AND USE OF PETROLEUM IN CALIFORNIA."

(Concluded from page 242.)

Nitrogen is found in most local crude oils, and appears to exist in the form of organic (pyridin?) bases, soluble in dilute acids. It is readily removed by the acid treatment, and does not appear to have any detrimental effect.

The following table shews the percentages of nitrogen, sulphur, and asphaltene in samples of crude oil from various parts of the State. The sulphur is determined by combustion with sodium peroxid, the nitrogen by Kjeldahl's method, and the asphaltene by precipitation with excess of 70 deg. gasolene, washing and weighing. As the samples on which these determinations were made are not always identical, the gravity of oil used is stated opposite each determination. For other figures on sulphur, reference may be had to the analyses of Mr. H. N. Cooper:—

INCIDENTAL CONSTITUENTS OF CALIFORNIA CRUDE.

District.	Nitrogen.		Sulphur.		Asphaltene.	
	Gravity.	%	Gravity.	%	Gravity.	%
Coalinga	.. 34°	0.063	34°	0.068	33°	None
Coalinga	.. 22	0.302	22	0.817	22	2.04
Coalinga	.. 19	0.314	—	—	19	1.87
Coalinga	.. 18	0.299	18	0.874	18	2.83
Coalinga	.. 16	0.375	—	—	16	2.83
Kern River	.. 15	0.600	14	0.612	15	3.06
Sunset ..	.. 10	0.370	10	1.253	10	2.93
Sunset ..	.. 17	0.476	—	—	17	3.01
Midway..	.. 20	0.374	—	—	20	1.80
McKittrick	.. 19	0.800	18	0.870	19	2.35
McKittrick	.. 15	0.290	14	0.565	—	—
Santa Maria	.. 17	0.430	—	—	17	8.37
Summerland	.. —	0.880	15	0.898	15	3.36
Ventura	.. —	0.606	28	1.500	26	2.05
Los Angeles	.. —	0.648	14	1.082	14	3.99

It will be seen from these figures that neither sulphur nor nitrogen are present in these oils in such quantity as would interfere with refining operations.

The following table, copied from a paper by Prof. Edmund O'Neill, of the University of California, will give an idea of the ultimate constitution of California petroleum:—

ULTIMATE ANALYSIS OF CALIFORNIA CRUDE.

District.	Specific Gravity.	Hydrogen. Per Cent.	Carbon. Per Cent.
Colusa ..	0.9700	10.84	88.26
Bakersfield ..	—	11.30	85.80
Whittier ..	0.9397	11.50	86.09
Ojai Valley ..	0.9830	10.81	80.42
Kern ..	0.9572	12.16	84.86
Bakersfield ..	0.9572	10.72	86.32
Kern ..	0.9760	11.18	82.45
McKittrick ..	0.9458	11.45	86.06
Kern ..	0.9353	11.30	85.75
Sunset ..	0.9589	11.30	85.83
Contra Costa ..	0.9653	10.83	84.66
Coalinga..	0.8620	11.80	87.62
Napa County ..	0.9603	11.13	88.08
Humboldt ..	0.8810	12.03	86.69
Santa Clara ..	0.8515	12.88	86.08

The objects and the limitations of the chemical treatment applied to petroleum distillates are so well known that no petroleum refiner needs any suggestions on this subject. But to that portion of the general public which

comes into contact with the petroleum business on the refining side, a brief statement may be of interest, particularly in view of the large sums which have been wasted through the attempts of misguided or unscrupulous inventors of "processes."

Petroleum distillates as they come from the still are contaminated in various ways, with nitrogen and sulphur compounds, with asphalt or with the obscure substances which change into that body on exposure to the air, and with the unstable products of decomposition. These are all detrimental to the quality of the oil, in a great number of ways, and the object of the "treatment" is to destroy or remove these substances, leaving the oil a mixture of pure and stable hydrocarbons.

A large number of reagents will destroy or dissolve some of these impurities, but very few will attack all of them, especially when the choice is limited to the commonest and cheapest of chemicals. It has been proven by many years' experience, that to remove the most refractory of the impurities the treating agent must act not only as a solvent, but also as an oxidising agent, actually burning up and destroying a portion of the impurities. It is probable that every known chemical which can be had at reasonable cost has been used for this purpose, but after numberless experiments refiners have settled on commercial sulphuric acid as being not only much the cheapest, but also by far the best, of all the reagents available. This material is a strong acid, neutralising bodies of a basic nature, a powerful solvent for the unsaturated hydrocarbons, and one of the strongest oxidising agents known. Furthermore, it is very heavy, settling readily from the oil, is extremely cheap and everywhere obtainable, and where handled with ordinary discretion is free from any bad effects on the oil.

To remove certain bodies of an acid nature, not acted on by the first treatment, and to free the oil from any traces of the sulphuric acid, an alkaline solution must be used. Almost any alkali would answer this purpose, so long as it is soluble, and the very general use of caustic soda (sodium hydrate) for this purpose is due simply to the fact that, aside from quicklime, which is very difficult to handle, soda is by far the cheapest alkali known, in proportion to its neutralising strength.

In treating very heavy lubricating oils, any liquid treatment is unsatisfactory, for the reason that it is difficult to settle out the reagents and clear the oil. So that in this field there is undoubtedly room for improvement over the present processes, though there seems very little present prospect of such improvement being made. But so far as the treating of the lighter products from such petroleum as that of California is concerned, it seems very doubtful indeed whether any improvement over the present well-known methods could be made. To be an improvement, the new process must be either cheaper or more effective; effectiveness is a matter of

proof in any particular case, and can only be determined by a careful balancing of the results of the new methods against those of the old, taking care that the present methods are applied to the samples under question, by some one familiar with the subject. But when the question of cost is considered, it must be borne in mind that the expense for the chemicals used in purifying the lighter oils is almost infinitesimal, when figured down to a single gallon. The cost of the chemicals used in finishing a gallon of kerosene should not, under any ordinary circumstances, be more than one-third of one cent, while in many cases it is very much less. The claims, sometimes made, of a saving of two or three cents per gallon in the cost of treating kerosene, by the use of some process, are patently absurd.

Another point which should be borne in mind in considering the claims of "process men," is that any chemical treatment has its limitations, which in the nature of things cannot be passed. The object of any chemical treatment is to remove impurities, and when these are removed, purification inevitably ceases. If in any particular case the undesirable qualities to be corrected in a distillate are due to impurities, proper treatment will correct these defects, but if they are due to the nature of the oil itself, treatment can not and will not be a remedy. Chemical treatment will never make any notable change in the specific gravity, viscosity, flash point, or boiling point of the lighter products of petroleum, and where defects in burning quality or otherwise are due to these points, or rather to the chemical nature of the oil, thus indicated, no imaginable combination or manipulation of chemicals will have any further effect than would be realised by a single treatment with the well-known reagents now in use.

The petroleum refining methods now in vogue are so well settled, by such long experience, that progress is much more likely to be in the way of still manipulation, of reduction of fuel and steam, in prevention of overheating and cracking; in brief, in the adaptation of details and proportions to the particular conditions to be met, than in inventions involving any radical change in the methods of either distillation or chemical treatment.

THE OIL TANK STEAMSHIP COMPANY.

On October 26th there was registered, at Somerset House, the Oil Tank Steamship Co., with a capital of £100,000, divided into one hundred thousand shares of £1 each. The objects of the company are to acquire a steamship in course of construction at Newcastle-on-Tyne, to be called the "Oberon," or otherwise, to adopt an agreement with Swan, Hunter and Wigham-Richardson, Ltd., and to carry on the business of ship-owners, shipbuilders, dealers in and carriers and distributors of petroleum and naphtha and their products and oils of all kinds, etc. The signatories are:—

Sir William B. Bowring, Bart., Liverpool.

F. C. Bowring, 20, Castle Street, Liverpool.

H. A. Bowring, 20, Castle Street, Liverpool.

C. W. Bowring, 20, Castle Street, Liverpool.

E. A. Bowring, 20, Castle Street, Liverpool.

W. G. Band, 20, Castle Street, Liverpool.

W. Lawton, 20, Castle Street, Liverpool.

There is to be no initial public issue. Messrs. C. T. Bowring and Co., Ltd., are the managers.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended October 26th, was 263,000 poods, or 4,240 tons; and for the week ended November 2nd was 269,000 poods, or 4,336 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended October 27th was 260,000 poods, or 4,192 tons; and for the week ended November 3rd was 266,000 poods, or 4,289 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 27th October was 140,235 poods, or 2,261 tons; and for the week ended 3rd November, 149,620 poods, or 2,413 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 27th October was 135,764 poods, or 2,189 tons; and for the week ended 3rd November was 132,776 poods, or 2,140 tons.

GULF REFINING CO., Refiners of Indian Territory and Texas Petroleum.

We make a Speciality of
SUPERIOR LUBRICATING OILS OF HIGH VISCOSITY AND LOW COLD TEST.

Our Kerosene and Gasoline are manufactured from high grade Indian Territory Crude Oil.

Prompt Shipments from New York, Philadelphia,
Boston, New Orleans and Port Arthur, Texas.

Special Prices to Large Jobbers and Refiners
CORRESPONDENCE SOLICITED.

General Sales Office—**FRICK BUILDING ANNEX, PITTSBURGH, PA., U.S.A.**

European Representative—**H. E. WATSON, 10, RUE THIMONNIER, PARIS, FRANCE.**

The American Oil Market.

New York, Week ended Oct. 26th.

Nothing of an important character has been disclosed as to developments in the fourth sand districts of Wetzel and Monongalia counties, West Virginia, which have attracted principal interest of late in the lower south-west fields, but prospects are considered more encouraging for good producers within these districts than in any other sections. A stimulating factor is the continued good record of the well in Church district, Wetzel county, averaging in excess of 350 barrels a day. A fair degree of activity, however, is noted in shallow sand operations in the State, but reports so far have indicated little better than light wells, most of which are within well defined limits. Shooting wells in some of the old districts has rewarded operators. Lincoln county in the same State is attracting keener interest, following what is declared to be the best strike in the Berea grit in that section, being credited with 50 barrels at a comparatively shallow depth. Light pumpers continue to be the rule of the Congo pool in Hancock county. In south-eastern Ohio many dusters have been encountered in shallow sand operations, and any productive well in excess of 10 barrels proves an exception. The runs for Ohio for the first half of the month, says the *Oil, Paint and Drug Reporter*, reached a total of 355,275 barrels, against deliveries of 287,095 barrels. Indiana runs for the same period were 166,222 barrels, while shipments aggregated 451,998 barrels. Illinois operators are taking advantage of the present favourable weather conditions, especially in Crawford county where the production is maintaining a very high level. Two late completions are credited with more than 1,000 barrels a day each and a dozen new wells near Oblong are reported good for 250 barrels or more each. Stocks are accumulating at a rapid rate and a slack in operations would be welcomed so that the pipe lines can do better justice to the enormous output. Our correspondent in the Kentucky-Tennessee fields writes that the deeper formations of Kentucky are attracting more speculative interest, and he reports a rig up for the first hole in Union county where several thousand acres are under lease for thorough tests. Advices from the Gulf coast fields indicate that Spindle Top is again the centre of interest among Texas operators and a recent completion shewing an initial capacity of 700 barrels a day has stimulated a rush for leases. Field operations in both Texas and Louisiana during the first half of the month, however, note a decline in production of more than 7,000 barrels since the close of September. Shipments of crude by vessel were heavier and production and consumption will probably be more evenly balanced for October than for the previous month. The first shipment of Indian Territory crude from Sabine since the connection of the pipe line with tide-water has been reported. Development work for the first two weeks of October was also light as compared with that for the corresponding period in September.

REFINED AND PRODUCTS.—The local market for refined has developed nothing of particular interest within the interval beyond the increased movement into foreign channels, due to the better facilities by the tank steamers. Of the total clearances of 13,428,670 gallons during the week, 8,772,000 gallons were shipped in bulk. Our record for the previous week comprised 8,052,870 gallons, of which 7,607,500 gallons were in bulk. In addition, there was an engagement of 180,000 cases (1,800,000 gallons) for November shipment to Penang, Singapore, Macassar and one port on north coast of Java. No price changes are to be recorded in the export or domestic schedule, the general tendency of the market being one of maintained firmness throughout.

The demand for products has been of steady proportions for manufacturing requirements, but of diminished extent for automobiles. The export movement in naphtha continues to abate, clearances for the week being unusually light at 17,800 gallons, against 167,900 gallons for the previous week. Values remain without quotable change for all varieties.

CLOSING QUOTATIONS

	CRUDE.	Week ended	
		Oct. 19. 1907.	Oct. 26. 1907.
Pennsylvania crude in bbls.		\$8.20	\$8.20
Pennsylvania crude in bulk		4.75	4.75
Residuum, bbls. for export		6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Oct. 26. 1906.	Oct. 26. 1907.
Pennsylvania		1.64	1.78
Tiona		1.74	1.78
North Lima		0.98	0.94
South Lima		0.93	0.89
Indiana		0.93	0.89
CANADIAN OIL:			
Petrolia		1.37	1.34

REFINED—FOR EXPORT.

		Week ended	
		Oct. 26.	
Barrels, cargo	per gal.	\$8.75	@ 10.75
Philadelphia		8.70	@ 10.70
Bulk, New York		5.00	@ 7.00
Bulk, Philadelphia		4.95	@ 6.95
Cases, New York		10.90	@ 13.90
Cases, Philadelphia		10.85	@ 13.85

REFINED IN CASES—IIO FIRE TEST.

		Week ended	
		Oct. 19. 1907.	Oct. 26. 1907.
3,000 to 10,000		11.05	11.05
1,000 to 3,000		11.10	11.10

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Oct. 19.	Oct. 26.
120 fire test, S.W.	in barrels	12	12
130 fire test, S.W.		12½	12½
150 fire test, W.W.		13½	13½
In bulk from tanks		10	10
300 fire test		13½@14	13½@14

NAPHTHA AND GASOLENE.

		Week ended	
		Oct. 19.	Oct. 26.
Naphtha, crude, car. lots, 68 @ 72 deg.		16.00	15.00
Gasolene, 86 deg.		24.00	24.00

PENNSYLVANIAN OIL RUNS from Oct. 16th to Oct. 21st were:—Oct. 16th, 96,318; Oct. 17th, 190,990; Oct. 18th and 19th, 270,481; Oct. 20th, 254,459; Oct. 21st, 86,970. For the month of September, 2,613,959.

THE DELIVERIES OF PENNSYLVANIA OIL from Oct. 16th to Oct. 22nd were:—Oct. 16th, 176,457; Oct. 17th, 173,494; Oct. 18th, 193,666; Oct. 19th and 20th, 319,551; Oct. 21st, 182,351; Oct. 22nd, 151,246. For the month of September, 5,654,718.

CLEARANCES FOR THE WEEK.

During the week ended Oct. 25th, and since Jan. 1 the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.	Year.	1906.
Refined		13,428,670	392,270,355	377,444,894
Crude		3,350	1,473,725	232,900
Naphtha		17,800	7,519,970	14,251,484
Residuum		—	689,237	4,099,600

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

		Gallons.	
From New York, week ended Oct. 25th		17,908,243	
Total from New York, from Jan. 1st, 1907		574,588,528	
Same period last year		504,176,094	
Increase		70,412,434	
From United States, week ended Oct. 25th		29,143,717	
Total from United States, since Jan. 1st, 1907		1,037,550,688	
Same period last year		992,187,708	
Increase		45,362,980	

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The "Review" Shipping List.

NOVEMBER 8, 1907.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Selzaete	Lisbon.....	P. Shoreham, Nov. 5	ETELKA	London	Philadelphia	P. Lizard, Oct. 23
ALICE ISABELLE..	Sables d'Olonne	Philadelphia	L. Nov. 2	EUPLECTELA	Bombay	Aroe Bay ..	L. Oct. 26
ALEMBIC	New York ..	Sydney(C.B.)	L. Oct. 18	EXCELSIOR	New York ..	Flushing	P. Dover, Nov. 6
AMERICAN	Antwerp	Kustendje ..	Arr. Oct. 29	EZIO	—	—	Coasting Peru
APPALACHEE	Kustendje ..	Bombay	At Port Said, Oct. 27	FRANCE MARIE ..	Marseilles ..	Philadelphia	P. Tarifa, Oct. 22
APSCHERON.....	St. Louis (Rhône)	Ibrail	L. Oct. 29	GEESTEMUNDE ..	Tyne	Philadelphia	Arr. Nov. 3
ARAL.....	Tyne	Philadelphia	P. Dunnet Head, Nov. 3	GENESSE	New Orleans	Sabine Pass	L. Oct. 18
ARAS.....	Dublin	Penarth	Arr. Nov. 5	GEORGIAN PRINCE	Rouen	Philadelphia	Arr. Nov. 1
ARGYLL	—	—	Coasting U.S. (Pacific)	GOLDMOUTH	Cardiff	—	At Port Said, Nov. 3-4
ASHTABULA	San Francisco	Shanghai ..	L. Oct. 27	GUTHEIL	Stettin.....	Hamburg ..	Arr. Oct. 10
ASTRAKHAN.....	Hamburg ..	Philadelphia	Arr. Nov. 2	HAINAUT	Smyrna	Antwerp....	Arr. Oct. 25
ATLAS	—	—	Coasting U.S. (Pacific)	HARRY WADSWORTH	London	New Orleans	L. Portland, Oct. 13
AUGUSTA	Boston	Philadelphia	L. Oct. 28	HELIOS.....	Tyne	Philadelphia	Arr. Nov. 6
AUGUST KORFF..	Manchester..	Philadelphia	P. O. Hd. Kinsale Oct. 28	HOTHAM NEWTON	Philadelphia	Calais	P. Del. Break., Oct. 25
AUREOLE	New York ..	Belfast	P. Fastnet, Nov. 5	HOUSATONIC	Bombay	Bengkalis ..	L. Oct. 15
AZOV.....	—	—	Trading on W.C. of South Amca.	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BAKU STANDARD	Alexandria..	Kustendje ..	P. Dardenelles, Nov. 1	IOANNIS COUTZIS	Batoum	Rouen	P. Gibraltar, Oct. 31
BALAKANI	Cardiff.....	Port Arthur	P. Sand Key, Nov. 6	J.B.AUG.KESSLER	Rotterdam ..	New York ..	L. Oct. 26
BATOUM	Karatzu	Singapore ..	L. Oct. 25	JAMES BRAND	Kustendje ..	London	Arr. Nov. 5
BAYONNE	Batoum	Leghorn	Arr. Oct. 30	JULES HENRI	Philadelphia	Marseilles ..	P. Del. Break., Oct. 28
BEACON LIGHT..	Newport....	Philadelphia	L. Oct. 31	KURA	Kustendje ..	Hull.....	Arr. Nov. 6
BEME	Rangoon....	Bombay	P. Galle, Oct. 14	LA CAMPINE.....	Antwerp	Philadelphia	P. Scilly, Oct. 28
BLOOMFIELD	Batoum	Manchester	Arr. Nov. 5	LA FLANDRE	New York ..	Ghent	P. Lizard, Nov. 5
BORJOM	Alexandria..	Batoum	At Constant'ple, Sept. 14	LA HESBAYE.....	Antwerp	Batoum	Off Ushant, Nov. 5
BRILLIANT	Hamburg & Tyne	Philadelphia	P. Dunnet Head, Nov. 6	LA MADELEINE ..	Algiers	Brest	Arr. June 15
BROADMAYNE	Philadelphia	Havre	Arr. Nov. 5	LA VIGUESA	Philadelphia	Corunna....	Arr. Oct. 30
BULLMOUTH	Hankow	Palembang..	L. Shanghai, Oct. 29	LACKAWANNA....	Liverpool ..	New York or Philadelphia	L. Nov. 2
BULYSES	Singapore ..	New York ..	Arr. Oct. 25	LANSING.....	Honolulu ..	Port Louis ..	Arr. Oct. 19
BURGERMEISTER	Philadelphia	Oxelosund & Stockholm	P. Elsinore, Nov. 2	LE COQ.....	Philadelphia	Havre	P. Del. Break., Oct. 24
PETERSEN	Shanghai ..	San Francisco	Arr. Oct. 19	LOUTSCH	Batoum	Odessa	L. Aug. 14
CALCUTTA.....	London	Port Arthur	P. Scilly, Nov. 3	LUCERNA	New York ..	Bordeaux ..	L. Oct. 24
CAPTAIN A. F. LUCAS	—	—	—	LUCILINE	Philadelphia	Rouen.....	P. Del. Break., Nov. 3
CARDIUM	Samboe	Singapore ..	Arr. about Oct. 22	LUMEN.....	Kustendje ..	Rouen	L. Constant'ple, Oct. 31
CATANIA.....	Gaviota	San Francisco	Arr. Oct. 5	LUX	Seville.....	Philadelphia	L. Gibraltar, Oct. 28
CAUCASIAN	London	Port Arthur (Texas)	P. Lizard, Nov. 4	MANHATTAN	Batoum	New York ..	Arr. Nov. 3
CHARLOIS	Rotterdam ..	Philadelphia	Arr. Nov. 6	MANNHEIM	Philadelphia	Hamburg ..	Arr. Nov. 3
CHESAPEAKE	Philadelphia	Calcutta	Arr. Oct. 15	MARGARETHA ..	Philadelphia	Genoa and Tunis	P. Del. Break., Oct. 24
CHESTER	Philadelphia	Antwerp	Arr. Nov. 6	MAVERICK.....	San Francisco	Seattle.....	Arr. Oct. 22
CIRCASIAN PRINCE	Talara.....	Callao	P. Payta, Sept. 8	METEOR.....	Batoum	—	At Port Said, Nov. 6-7
CLAM	Colombo....	Balekappan	L. Oct. 6	MEXICAN PRINCE	Barry	Sulina	P. Dardenelles, Oct. 31
COL. E. L. DRAKE	San Francisco	Seattle.....	P. Neah, Oct. 22	MIRA	Port Talbot	Philadelphia	Arr. Nov. 3
COWRIE	Cardiff	New York ..	P. Fastnet, Nov. 4	MUREX.....	Singapore ..	Calcutta	Arr. Oct. 16
CUYAHOGA	Tyne	Philadelphia	L. Nov. 5	NARRAGANSETT..	London	New York ..	Arr. Nov. 1
CYMBELINE	Philadelphia	Dublin	Sp. Nov. 1, 47°32' 41°N 20'W	NERITE	—	—	Tr. in China Seas
CZAR NICOLAI II.	Hamburg ..	Batoum	P. Gibraltar, Oct. 27	NEW YORK	New York ..	Southampton	L. Nov. 2
DAGHESTAN.....	Antwerp	Batoum	P. Gibraltar, Nov. 2	OCEAN	Antwerp	New York ..	Arr. Oct. 29
DAKOTAH	San Francisco	China	L. Sept. 7	OILFIELD	Philadelphia	Rouen	P. Del. Break, Oct. 27
DELAWARE	Barrow	Newport Nws	Arr. Nov. 1	ORANJE PRINCE..	Tyne	Havana	L. Sept. 26
DEUTSCHLAND ..	Tyne	New York ..	P. Dunnet Head, Nov. 3	ORIFLAMME	Cette	Novorossisk	P. Constant'ple, Nov. 4
DIAMANT	New York ..	Stettin.....	L. Oct. 20	OSCEOLA	Bluefields ..	Boston.....	L. Oct. 19
EDWARD DAWSON	Christiana ..	Port Arthur	P. Cape Henry, Oct. 24	OTTAWA	Baltimore ..	London	P. Cape Henry Oct. 24
ELAX.....	Philadelphia	Savona	P. Gibraltar, Nov. 6	OURAL	Antwerp....	Philadelphia	P. Lizard, Nov. 5
ELISE MARIE	Amsterdam..	New York ..	P. Dover, Oct. 26	PALEMBANG	Canton	Hong Kong..	Arr. Sept. 4
ENERGIE	New York ..	Danzig	P. Butt of Lewis, Nov. 3	PAULA	Pillau	Tyne	L. Oct. 31
ERIVAN	Tyne	Batoum	L. Nov. 5	PECTAN	Port Arthur (Texas)	London	Arr. Oct. 6
				PENNOIL.....	Philadelphia	Rotterdam ..	Arr. Nov. 5
				PERLAK	Calcutta	Aroe Bay ..	L. Sept. 22

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PHOEBUS	Hamburg ..	New York ..	In Tyne, Nov. 5	SOYO MARU	Antwerp	San Francisco	Off Ushant, Nov. 5
PINNA	Yokohama ..	Port Harford	L. Oct. 31	SPONDILUS	Singapore ..	Europe	L. Oct. 26
POTOMAC	Philadelphia	Avonmouth	P. O. Hd. Kinsale Nov. 6	STANDARD	New York ..	Swinemuude	L. Oct. 31
PROMETHEUS....	Rotterdam ..	New York ..	Off the Wight, Oct. 28	STROMBUS	Cardiff.....	Singapore ..	Arr. Nov. 2
PRUDENTIA	Singapore ..	Swatow	Arr. Sept. 7	SURAM.....	New York ..	Hull	Off Lizard, Nov. 4
QUEVILLY.....	Philadelphia	Rouen.....	Sp. Nov. 1, 48 N. 10 W.	SUWANEE	Manchester	New York ..	Arr. Oct. 26
RION.....	Belfast	Newport	Arr. Nov. 4	SVIET	Batoum	Alexandria ..	Arr. Oct. 27
ROCK LIGHT	Ibrail	Amsterdam..	L. Constant'ple, Oct. 30	TELENA	Rangoon....	Rotterdam..	Arr. Nov. 3
ROMANY.....	Thameshaven	Barrow	Arr. Nov. 1	TEREK.....	Hamburg ..	London	Arr. Oct. 29
ROSSIJA	Tyne	Swinemunde	L. Nov. 5	TIFLIS	Batoum	Antwerp	P. Sagres, Nov. 3
ROTTERDAM	Calcutta	Boston & New York	L. Colombo, Nov. 1	TIOGA	Galveston ..	London	Arr. Nov. 1
RUSSIAN PRINCE	Tampico	Philadelphia	Arr. Oct. 27	TONAWANDA	San Francisco	Hankow	L. Sept. 12
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	TROCAS	Balekappan	Shanghai ..	L. Nov. 2
SAN CRISTOBAL..	Swansea	Philadelphia	In Mumbles Roads, Nov. 6	TURBO.....	Port Arthur (Texas)	Hamburg ..	P. Cap. Henry, Oct. 26
SAN IGNACIO DE LOYOLA	Philadelphia	Gijon	P. Del. Break., Sept. 16	TUSCARORA	Avonmouth..	Liverpool ..	Arr. Oct. 24
SAXOLEINE	Cette	Constant'ple	L. Nov. 2	TWINGONE	Rangoon ..	Madras	L. Oct. 23
SEMINOLE.....	San Francisco	Tongkee	L. Oct. 23	VEDRA.....	Yokohama ..	Palembang..	L. Oct. 29
SINGU	—	—	Tr. in East Indies	VILLE DE DIEPPE	Passage West	Philadelphia	Sp. Sept. 24, 50 N. 15 W.
SNOWFLAKE.....	London	Philadelphia	P. Lizard, Oct. 30	VOLUTE	Chingkiang..	Shanghai ..	Arr. Nov. 2
				WASHINGTON....	Antwerp	New York ..	Off the Wight, Oct. 24
				WEEHAWKEN	London	New York ..	Arr. Oct. 29
				WILLKOMMEN....	Philadelphia	Gothenburg	P. Dunnet Head, Nov. 4
				WINNEBAGO	San Francisco	Canton	L. Oct. 5

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

November 8th, 1907.

Refined Petroleum is unchanged in price and is quoted as follows:—Russian and Roumanian, 6½d.; American, 7½d.; Water White, 8½d.

LUBRICATING OILS.

Some grades are slightly higher:—

American pale, £7 7s. 6d. to £11.

American dark cylinder, from £9 2s. 6d.

American filtered cylinder, from £11 19s. 6d.

No. 1 Russian, £10 5s.

TURPENTINE.

The market has been very flat since our last report and it is now about 3s. per cwt. lower in price, the latest quotations being for Spot, and up to the end of the year 35s. 9d. to 36s., and for the first four months about 9d. higher.

LIVERPOOL OIL MARKET.

November 7th.

Refined oils are quiet, and sellers quote 6¾d. for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0½d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, November 7th.

Refined, in cases, is steady at 10.90; Standard White, 8.75; Credit balances, 1.78c.

PHILADELPHIA, November 7th.

Standard White is still quoted at 8.70.

RUSSIA.

BAKU, November 2nd.

The Baku oil market is firm. Light crude oil, spot, 23½ copecs per pood; residuals, in ships, 27 copecs; heavy Balakhany crude, in ships, 26 copecs.

BELGIUM.

ANTWERP, November 2nd.

The petroleum market is firm. Price of Standard White, spot, 22½ francs per 100 kilos.

FRANCE.

PARIS, November 3rd.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34.25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, November 2nd.

The kerosene market is firm. The price of American Standard White is 7.55 marks per 50 kilos.

ROUMANIA.

November 2nd.

Crude oil from different fields, including	Francs
pipe line charges, per 100 kgs.	... 4'05-4'10
Refined oil, exclusive of taxes	... 7'00- —
Motor benzine, including taxes	... 23'00-24'00
Benzine, doubly refined	... 25'00-26'00
Residuals in tank waggons, at refinery	... 3'60-3'80
Paraffin	... 120'00-125'00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7'00- —
Benzine, sp. gr. 0.710-0.715	... 20'00-21'00
" sp. gr. 0.715-0.720	... 18'00-19'00
" sp. gr. 0.730-0.740	... 14'00-15'00
" sp. gr. 0.745-0.755	... 12'00-13'00

INDIA.

BOMBAY, October 19th.

Market still strong.

Royal Portuguese Railway Company.

TENDERS ARE INVITED for the Supply of 4,140 Tons of Mineral Oil (Creosote) for Timber Traverses Injections. Tenders will be received at Lisbon up to 25th November.

Full particulars may be obtained at the Company's Office, 28, rue de Châteaudun, Paris.

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IMPORTS of PETROLEUM into UNITED KINGDOM

*Specially prepared for .
this Journal by . . .
the Custom House. .*

FOR THE WEEK ENDED 28TH OCTOBER, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
Oct. LONDON—				
22	Mordaunt Bros.	Lub.	10,500	New York
22	Fielder, Hickman and Co. . .	"	5,040	"
22	Livett Frank and Sons .. .	"	1,680	"
22	Anglo-American Oil Co. . .	"	34,000	Philadel.
23	London and India Docks Co.	"	80	Hamburg
24	T. H. Lee	"	190	"
24	Page, Son and East. . .	Lub.Gr.	360	Antwerp
24	Anglo-American Oil Co. . .	Lub.	50,360	New York
24	Mercantile Lighterage Co. . .	"	5,000	"
24	A. Brown and Co. . .	"	4,800	Philadel.
25	Worthington and Boler .. .	"	4 400	"
25	British Pet. Co. (Caucasian)	Lamp	1,731,000	"
25	Asiatic Pet. Co. (Romany) . .	Benzine	510,350	Balikpappan
25	T. H. Lee	Lub.	170	Hamburg
26	G. and H. Green .. .	"	4,620	New York
26	Lubricating & Fuel Oils, Ltd.	"	19,680	Philadel.
28	Anglo-American Oil Co. . .	"	23,600	"
28	Ocean Oil Co. . .	"	4,800	"
28	Produce Brokers .. .	"	4,800	New York
28	Scott's Wharf .. .	"	1,200	"
28	Consolidated Petroleum Co. (Terek)	Lamp	1,424,800	Hamburg
28	T. H. Lee	Lub.	140	"
28	London and India Docks Co.	"	2,880	"
28	Page, Son and East .. .	"	160	Antwerp
28	Wilkins, Campbell and Co.	Lub.Gr.	640	"
LIVERPOOL—				
22	J. Light and Son	Lub.	4,000	New York
23	Geo. B. Taylor	"	38,400	"
23	Meade-King, Robinson & Co.	"	6,000	Philadel.
23	"	Lub. Gr.	400	Hamburg
23	Vacuum Oil Co. . .	"	480	Rotterdam
24	Worthington and Boler .. .	Lub.	1,000	Philadel.
24	W. B. Dick and Co. . .	"	10,270	"
24	Meade-King, Robinson & Co.	"	17,600	"
24	"	Lamp	22,000	"
24	"	"	4,000	Hamburg
25	"	Lub.	14,200	Baltimore
25	"	"	4,840	Toledo
25	Crew, Levick and Co. . .	"	14,060	Philadel.
25	"	M. Colza	7,080	"
26	Midland Railway .. .	Lub.	1,060	"
26	Staveley and Co. . .	"	230	New York
26	Rogers and Bright .. .	"	360	"
27	G. B. Taylor. . .	"	12,960	"
27	W. B. Dick and Co. . .	"	8,280	"
BRISTOL—				
22	Anglo-American Oil Co. (August Korff)	"	350,420	Philadel.
22	"	Gas	88,390	"
24	First Anglo-Russian Oil Co.	Lub.	2,640	New York

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Oct.				
24	H. R. James and Sons .. .	Lub.	6,000	New York
24	E. Stock and Sons .. .	"	2,750	Hamburg
GLOUCESTER—				
24	Bristol Steam Nav. Co. . .	"	120	"
GRIMSBY—				
24	J. Sutcliffe and Son. . .	"	370	Antwerp
HULL—				
22	W. Gilyott and Co. . .	"	81,240	New York
24	Hull & Netherlands S.S. Co.	Tar Oil	2,400	Rotterdam
MANCHESTER—				
22	Meade-King, Robinson & Co.	Lub.	15,200	Philadel.
22	"	Lamp	20,000	"
24	Geo. B. Taylor	Lub.	80	Hamburg
24	Anglo-American Oil Co. (August Korff)	"	494,000	Philadel.
24	"	Gas	330,000	"
26	J. T. Fletcher and Co. . .	Lub.	100	Antwerp
MIDDLESBRO'—				
26	E. Harris and Co. . .	"	2,480	"
NEWCASTLE—				
24	Tyne-Tees S.S. Co. . .	"	240	Hamburg
26	"	"	1,160	"
26	"	"	1,840	Antwerp
NEWPORT—				
25	Burt, Boulton and Heywood (Commercial)	Creosote	22,130	Selzaette
GLASGOW—				
28	Arbuckle, Smith and Co. . .	Lub.Gr.	430	Philadel.
28	Anchor Line	Lub.	1,920	New York
28	"	"	46,600	"
28	"	"	18,000	"
GRANGEMOUTH—				
24	W. Graham-Yool and Co. . .	Lamp	4,800	Hamburg
24	J. Currie and Co. . .	Lub.	4,320	"
24	"	"	240	"
25	Hopkins, Paton and Co. . .	"	480	Antwerp
LEITH—				
22	W. Graham-Yooll and Co. . .	Lamp	3,790	Hamburg
22	J. Currie and Co. . .	Lub.	240	"
26	"	"	340	"
26	"	"	360	Bremen
Total for Week			5,515,550	

FOR THE WEEK ENDED 4TH NOVEMBER, 1907—

LONDON—

29	Schenker and Co. . .	Lub.	480	Antwerp
14	British Petroleum Co. (Kura)	Lamp	486,000	Kustendje

MIDLAND RY-CARRIAGE & WAGON CO., LTD.,

Midland Works,
BIRMINGHAM.

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FOR
HEATERS.

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SOLE IMPORTERS:—

Anglo-American Oil Co., Ltd.,

22, Billiter Street,

Telephone Nos.:—5733-7 Avenue.

LONDON, E.C.

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Oct. LONDON—				
29	Fielder, Hickman and Co...	Lub.	20,400	New York
29	Anglo-American Oil Co. ..	"	28,800	"
29	"	"	15,200	"
30	" (Tioga)	Gas	676,770	Sabine
30	London and India Dock Co.	Lub.	70	Hamburg
31	Bryce and Rumpff ..	"	140	Bremen
31	Page, Son and East..	"	2,440	Antwerp
31	British Petroleum Co. (James Brand)	Gas	1,404,000	Kustendje
Nov.				
1	Wilkins, Campbell and Co..	Lub. Gr.	480	Antwerp
1	Anglo-American Oil Co. (Tioga)	Gas	276,770	Sabine
4	American Express Co. ..	Lub.	40	New York
4	London and India Docks Co.	"	1,160	Hamburg
4	J. Harrison ..	"	260	Antwerp
4	Wilkins, Campbell and Co.	"	200	"
Oct. LIVERPOOL—				
29	Anglo-American Oil Co. (Lackawanna)	Lamp	758,030	Philadel.
29	"	Gas	539,400	"
29	Pickfords ..	Lub.	330	Hamburg
29	Meade-King, Robinson & Co.	"	2,000	"
30	Burnaby and Chantrell ..	L. Comp.	2,350	New York
30	Vacuum Oil Co. ..	Lub.	11,840	"
30	Valvoline Oil Co. ..	"	13,530	"
31	Geo. B. Taylor ..	"	178,240	"
31	Cunard Steamship Co. ..	"	800	"
31	Liverpool Storage Co. ..	"	32,000	Philadel.
31	Penwarden and Jackson ..	"	250	Antwerp
Nov.				
1	Liverpool Warehousing Co..	"	250	Hamburg
1	Bowring Petroleum Co. ..	"	1,020	Philadel.
1	A. Hopps and Sons..	Lamp	21,220	"
1	George B. Taylor ..	Lub.	2,800	"
1	W. B. Dick and Co. ..	"	10,390	"
1	Crew, Levick and Co. ..	"	18,740	"
2	American Line ..	"	5,400	"
2	Meade-King, Robinson & Co.	"	33,600	"
2	"	"	10,400	Hamburg
2	Huxley and Co. ..	"	280	"
4	Valvoline Oil Co. ..	"	11,280	New York
BARROW—				
4	Asiatic Petroleum Co. (Romany)	Spirit	982,760	Singapore
Oct. BRISTOL—				
29	Pickfords, Ltd. ..	Lub.	450	Hamburg
31	"	"	320	Antwerp
GRIMSBY—				
31	J. Sutcliffe and Sons ..	"	270	Rotterdam
HULL—				
29	Wilsons and N.E. Railway Shipping Co.	"	4,000	Antwerp
29	"	"	3,200	"
29	"	"	1,520	"
31	Hull and Neth. S.S. Co. ..	Tar oil	2,400	Harlingen
31	Wilsons and N.E. Railway Shipping Co.	Lub.	800	Hamburg
31	"	"	36,680	New York

DATE	PORT AND IMPORTERS	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Oct. MANCHESTER—				
29	D. Currie and Co. ..	"	440	Hamburg
29	W. Hodgson and Co. ..	"	6,070	Riga
29	British Pet. Co. (Aras)	Lamp	479,200	Kustendje
PLYMOUTH—				
29	Bristol Steam Nav. Co. ..	Lub. Gr.	280	Antwerp
GLASGOW—				
29	J. and A. Allan ..	Lub.	1,010	Boston
LEITH—				
29	W. Graham-Yooll and Co...	Lamp	3,270	Hamburg
29	G. Gibson and Co. ..	Lub.	4,040	Antwerp
BELFAST—				
29	British Pet. Co. (Rion)	Gas	771,000	Philadel.
DUBLIN—				
31	Palgrave, Murphy and Co. (Aras)	"	731,550	Kustendje
Total for Week ..			7,601,570	
Total for the Fortnight ..			11,117,120	

Deduct to Correct :—

ABERDEEN—

21/10 R. Cannon, Reid and Co. Lub. 1,000 Hamburg

Add to Correct :—

ABERDEEN—

21/10 R. Cannon Reid and Co. Lamp 1,000 "

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.)

APPLICATIONS FILED IN GREAT BRITAIN.

Improvements Connected with the Amelioration of Petrol, Alcohol, Benzol and the like.—Reginald Wynne, 18, Southampton Buildings, London. No. 24115 of 1907.

Improvements in and Relating to the Manufacture of Non-Inflammable Benzine and the like.—Astley Cooper and Montagu Manchu Shattock, 322, High Holborn, London. No. 24125 of 1907.

APPLICATIONS PUBLISHED IN GREAT BRITAIN.

Method of Deodorising and Desulphurating Mineral Oils.—Gustaf Henrik Hellsing, of Babäck, Sweden. No. 9180 of 1907.

This relates to a method of deodorising and desulphurating mineral oils, which consists in treating the same with one or more solutions of salts of heavy metals, if desired, in the presence of choride of alkali or of ammonium and separating the oil thus treated.

Telegraphic Address :—"OLEINE."

Telephone Nos. :—{ 249 & 254 LIVERPOOL.
1990 MANCHESTER.

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11, Old Hall Street, LIVERPOOL, & 18, Exchange Street, MANCHESTER,

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GAS OILS MINERAL LUBRICATING OILS, PARAFFIN SCALE AND WAX, PETROLEUM SPIRIT, BENZOLINE AND BENZINE, SWANSDOWN WATER WHITE AMERICAN PETROLEUM.

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVII. (New Series.)

NOVEMBER 23RD, 1907.

No. 412.

Editorial Notes.

The history of the developments in the **The Glenn Pool Boom.** Glenn Pool, Indian Territory, furnishes progress the like of which is perhaps unparalleled in oil field operations. This pool, it will be remembered, is the one whose prolific nature has been responsible for the great trunk pipe line projects to the Gulf of Mexico, and it is here that to-day is witnessed activity the like of which is not within living memory. Two years ago next month, the pool was discovered, at which time the richest oil land could be purchased for £20 per acre. The price per acre to-day is in the region of £2,500. The number of wells which are producing is 118, and the average production of each is about 150 barrels daily, the daily production therefore being approximately 170,000 barrels. The field is now finding regular employment for over three thousand men, and the 250 steel storage tanks in the field are estimated to have necessitated an outlay of \$7,000,000, while in the pipe lines running from the field, to take care of the crude production, \$10,000,000 has been sunk. Within sixteen months, the Glenn Pool has produced and marketed more than 25,000,000 barrels of oil.

Elsewhere in this issue we **The Advantages of Liquid Fuel upon Steamers.** publish a most interesting article which contains the salient points contained in a dissertation upon the above subject. We would direct the careful attention of our readers to this subject, for the matters touched upon therein are of a nature totally removed from those phases of the question generally dealt with by marine engineers. Mr. Foerster has certainly grappled with the subject in a masterful way, and his conclusions—eminently in favour of oil fuel—should go a long way to hastening that time when oil will be universally recognised as a fuel for ocean-going vessels far more serviceable and economical than its older competitor, coal. The fact that to-day there are between one and two thousand vessels regularly utilising oil fuel suggests in itself that liquid fuel has of late considerably progressed.

Although so far as English **The Development of Canada's Oil Resources.** capital is concerned, it has not entered very largely into the development of the oil fields of Canada in the past, there is every reason to believe that much activity will be displayed in the near future. At this week's meeting of the Canadian Oil Fields, Ltd., it was clearly demonstrated by Mr. Noble that if the company desired to become permanently successful it was imperative that an active policy of developing its rich territory should be commenced without delay. For a few years the com-

pany has been contented to go on in a most conservative fashion, doing very little development work, but in view of the great surprises which have been brought to light in the Moore territory, the shareholders now recognise that if they are to be in the profitable race, they must be "up and doing." Some of the prominent members of the company have agreed to confer with the board, and as a result of this, we have no doubt that a campaign will be initiated, the results of which will be seen in the days to come. We are not certain upon this point, but we imagine that some attempt will be put forth in order that the company's refinery at Petrolia may again be brought into the working list, and here alone a large additional source of revenue will be secured. While speaking upon the prospective extensive development of Canada's oil resources, we are reminded that one of the most recent concerns to enter the field is the Anglo-Canadian Petroleum Co., which, backed by English capital and an influential list of shareholders, is already shewing considerable energy in the Moore territory, where, a few weeks ago, it encountered a pleasant surprise in the shape of a record gas well—the largest known in Canada.

The financial crisis, which has **The Financial Crisis and the Roumanian Petroleum Industry.** assumed such an acute form and produced such serious perturbation in the money markets both of America and Europe, has most unfavourably effected the Roumanian petroleum industry. All the banks and financial institutions interested in that industry are limiting their activity and their development operations in the oil fields to the utmost. The schemes of operations for the coming year already prepared by most companies shew considerable reductions in expenditure and in the ordering of materials, and probably these programmes will be further cut down before being carried out in practice. The only exception to this rule is the Romano-American Co., whose financial resources appear to be unaffected by the financial crisis. For the last three months there was complete inactivity in the formation of new companies or firms for the petroleum industry, and all projects in this direction are temporarily abandoned. The shortage of ready money is so serious as to be felt even in the ordinary daily operations of the various firms. On the Bucarest money market, rates have gone up to a degree which makes them prohibitive for ordinary commercial purposes.

The holding of an International **An Opportunity for Oil.** Lighting and Heating Exhibition at St. Petersburg next January affords a unique opportunity for the uses of oil to be brought more prominently before the public than has so far been the case. There is, however, only a few weeks left in which the English manufacturers of lighting or heating appliances can secure space for the exhibition, and so we hope that a word to these will be

sufficient. Inasmuch as the exhibition is to be international in character, every effort has been put forth in order to induce foreign exhibitors to give it their support, and it is gratifying to note that up to the present France, Germany and Belgium are well to the front with exhibits. On the Russian railways, all exhibits which pay full freight to the exhibition will be allowed to return free of all charges, while the Austrian, German and French railways are making similar arrangements. English exhibits addressed to the exhibition will pass the Russian frontier without Customs examination, and they will moreover be imported into Russia free of duty. Dr. Dvorkovitz, the Honorary English representative, will be pleased to give readers any information which they may desire. The exhibition, we may add, will remain open for one month.

ANSWERS TO CORRESPONDENTS.

[The Editor is at all times pleased to answer any enquiries submitted by subscribers upon subjects of interest to the petroleum industry. Subscribers may, however, if they so desire, have their enquiries answered through the post. In cases where enquiries are replied to in these columns, the initials of the enquirer will be given should no "non de plume" be attached.]

TOWING BULK CARGOES.

H.C., HAMBURG.—We are not aware that any large bulk oil shipments have been towed across the Atlantic for discharge in Continental ports, but no doubt this is only a question of a short time. So far as London is concerned, the novelty of seeing an ocean-going oil barge in the Thames has almost worn off. A week or two ago, a cargo of over 4,000,000 gallons was brought by one of the Standard Co.'s barges, this being the third occasion upon which large bulk oil cargoes have been brought from America to this country in oil barges.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date November 21st, 1907, as follows:—

Following the easier prices of raw materials, tin plate makers are able to accept lower prices, and more business is doing. We quote oil sizes to-day as under:—

1C	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	13/6 to 13/7 $\frac{1}{2}$	per box.
1C	19 $\frac{1}{4}$ × 14	120 "	110 "	13/6 "	13/7 $\frac{1}{2}$ "
1C	20 × 10	225 "	156 "	19/3 "	19/6 "

F.o.b. Wales. Tin lining and iron hooping extra.

Late News from Moreni Bana.—Messrs. Campeanu and Co.'s well at Moreni-Bana, which has reached a depth of 612 metres, is still undergoing instrumentation, and it is therefore yet impossible to tell whether it has reached oil. Mr. L. Hamilton's well in the same locality and in the immediate neighbourhood of the Campeanu well has reached a depth of 800 metres. All the other borings at Bana-Moreni have been suspended.

A Reasonable Proposal.—The Roumanian petroleum refiners have made fresh representations to the Government with a view to the admission into the country duty free of the sulphuric acid required. The only sulphuric acid works in Roumania, at Valea Calugareasca, are far from able to satisfy the needs of the refineries, and the Steaua Romana has been compelled to erect its own sulphuric acid works, whilst the other refineries have to import large quantities from abroad. The refiners are quite prepared to take up the whole output of Roumania, and ask for the exemption of the duty on the quantity required by them in excess of the capacity of the Roumanian works.

LONDON OIL SHARE MARKET.

FRIDAY, NOVEMBER 22ND, 1907.

Although the situation on the London Stock Exchange during the past fortnight has not been nearly so acute, the position is still regarded with apprehension, and in some quarters an 8 per cent. Bank Rate, which has fortunately been avoided up to the present, is still considered a possible factor, although hopes are entertained that the issue of Treasury Bonds in America will considerably ease the monetary outlook.

We have another quiet week's dealings to report in connection with the Oil Share Group, but the few changes which occur in quotations are unfortunately in every instance of a downward character.

The following were the first prices quoted since our last issue:—

Anglo-Russian Petroleum, $\frac{1}{16}$ – $\frac{1}{8}$; Assam Oil, Ltd., $\frac{9}{16}$ – $\frac{11}{16}$; Baku Ordinary, 2s. 3d. to 2s. 9d.; Baku Pref. $\frac{7}{32}$ – $\frac{9}{32}$; Bibi-Eybat, $\frac{1}{4}$ – $\frac{3}{8}$; Californian Oilfields, 5–5 $\frac{1}{4}$; Californian 5 per cent. First Mortgage Debentures, 96–99; Californian Refineries, 1 $\frac{1}{8}$ –1 $\frac{3}{8}$; European Petroleum, $\frac{1}{16}$ – $\frac{3}{16}$; European 6 per cent. First Mortgage Debentures, 70–74; European 6 per cent. Second Mortgage Debentures, 34–37; Russian Ordinary, 2s. 6d. to 3s. 6d.; Russian 6 $\frac{1}{2}$ per cent. Preference, 3s. 6d. to 4s. 6d.; Russian 5 $\frac{1}{2}$ per cent. Debentures, 77–80; Russian 6 per cent. "B" Debentures, 53–58; Schibaieff Ordinary, 2s. to 3s.; Schibaieff Preference, 1–1 $\frac{1}{4}$; Spies Petroleum, $\frac{9}{32}$ – $\frac{11}{32}$; Shell Transport Ordinary, 41s. to 42s.; Shell Transport Preference, 9 $\frac{3}{4}$ –10, and they are still current with the following exceptions:—Baku Preference have lost $\frac{1}{32}$ at $\frac{3}{16}$ – $\frac{1}{4}$. There is a shrinkage in Californian 5 per cent. First Mortgage Debentures to 93–97, a fall of 6d. in Russian Ordinary at 2s. to 3s., and $\frac{1}{32}$ in the Preference at $\frac{3}{32}$ – $\frac{5}{32}$. Spies Petroleum at $\frac{1}{4}$ – $\frac{5}{16}$, are also $\frac{1}{32}$ easier, while Shell Transport Ordinary have experienced a good many fluctuations, rising at one time to 41s. 3d. to 42s. 3d., falling again to 38s. 6d. to 39s. 6d., and partially improving again to 39s. to 40s., while the Preference are quoted $\frac{1}{8}$ weaker at 9 $\frac{5}{8}$ –9 $\frac{7}{8}$.

At the mid-November settlement, which commenced on the 12th inst., rates of interest were high, 7 to 9 per cent. and even higher being exacted. A comparison of making-up prices with those fixed at the previous account shews few alterations. Californian Oilfields have fallen $\frac{5}{16}$ at 5 $\frac{1}{16}$, Schibaieff Ordinary 6d. at $\frac{1}{8}$, Shell Transport Ordinary 6d. at 42s., Spies 3d. at 6s. 3d., and Baku Preference 6d. at 4s. 6d. No change has taken place in Anglo-Russians at $\frac{1}{16}$, Baku Ordinary at 3s., Russian Preference at 4s., or Schibaieff Preference at 1 $\frac{1}{4}$.

SERIOUS ACCIDENT TO THE OIL TANKER "TROCAS."

A serious accident has overtaken the oil tanker "Trocas," a cablegram from Shanghai stating that the tanker is ashore below Kuikiang and in a bad position. The "Trocas," which was engaged in the Far Eastern trade, is as the name suggests one of the "Shell" Co.'s boats, having been built in 1893 at Sunderland. Her gross tonnage is 4,129.

THE THIRD INTERNATIONAL PETROLEUM CONGRESS AT BUCAREST.

THIRD SECTION.—LEGISLATION AND COMMERCE.

The section again assembled on Wednesday, 11th September, Mr. Spies, general manager of the Steaua-Romana Co., being in the chair.

A paper was read by Mr. Henry, mining engineer, in the name of Mr. Pierre Arbel (forming part of the French Congress Committee), on the subject of "The Transport of Petroleum."

The French Commission, said Mr. Henry, studying the technical conditions of transport and handling had divided the products into two categories:—(A) Slightly dangerous products and (B) dangerous products.

The first class was the only one which might form the subject of an international understanding to establish the technical conditions for handling and transport, whilst for class (B) each country had to be left to regulate as it wished the conditions for safety in regard to those products.

In regard to handling, the Transport Commission of the French group proposed the following desiderata:—

(1) Suppression by all Governments of the prohibition of night work in unloading of articles of class (A).

(2) Extension and unification as far as possible of the time ships are allowed at wharves.

Besides that the Commission would ask for a unification of the pipe lines and connections for loading or discharging of tank steamers into tank waggons.

As regarded transport, Mr. Henry mentioned that the 10-ton waggon had been known from 1855. Since that period there had been an ever existing tendency to increase the capacity of waggons, and waggons had been built of 15, 20 and up to 40 tons. Of course, these cars had to be on bogies, carried on four axle trees, grouped in twos.

In order to adopt that type of waggon it was evident that the permanent way had to satisfy special conditions. The author dwelt at length on the technical conditions connected with the question, and he expressed the desire that the railway companies should agree among themselves as to the conditions of construction in order that the countries having the same commercial requirements might be able to adopt the same types of waggons, satisfying all technical requirements.

The advantages derived from the adoption of waggons of large capacity, in Mr. Henry's opinion, were:—(1) A great economy (20 to 25 per cent.) in the dead weight to carry, *i.e.*, in the cost of traction, and consequently yields a surplus in the useful load. That saving would amount to 100 tons per train composed of tank waggons of 30,000 litres capacity as against waggons of 15,000 litres. (2) Reduction of about

30 per cent. in the length of jetties; thus a train of 800 tons, composed of 50 waggons of 10 tons each, requires 300 metres of line, whilst 180 metres is sufficient for a train of the same tonnage but composed of 40-ton waggons. (3) Weighing by means of weighing machines and manœuvring on turn-tables presented no difficulty if those waggons were adopted; on the contrary, they would result in a reduction of the number of men employed as well as a diminution in the time employed for the same tonnage. (4) Diminution in the risks of accidents and reduction in the number of brake guards employed, which might be estimated at 25 per cent. (5) Reduction in the cost of maintenance; (6) Increase in the power of trains, which was of great importance, and which would result in a great saving of time, and consequently greater rapidity in transport, and which would enable crises to be overcome.

All those considerations had caused a detailed investigation of the question to be made, and the Northern Railway Co. of France had granted for such cars the following reductions:—(1) Reduction of 5 per cent., plus 1 per cent. for every car of 40 tons in the train, with a maximum of 16 waggons; (2) rental of 0.05 francs per waggon per kilometre; and (3) return of empty waggons free of charge.

In conclusion, Mr. Henry maintained that those arrangements could be made general also for other companies, and both the merchants and the railway companies would gain by the advantages which would result. On the other hand, an international agreement on the subject would result in a great reduction in the cost of transport, and consequent reduction in the cost of the raw material. He made the following suggestions:—(1) Unification by the railway companies of the technical conditions of running waggons of great capacity made of beaten-out steel plates; and (2) reduction in the present rates for the transport of goods loaded in tank waggons, enjoying the normal reduced rate, of great capacity, supplied by consigners or consignees.

The Chairman, Mr. Spies, opened the discussion on the subject.

Mr. Drago, chief engineer of the traction and material department of the Roumanian State Railways, said that it was difficult to adopt such large waggons on all lines, but there was the Berne Bureau, which was entrusted with the task of regulating the conditions for waggons to enable them to circulate on the lines of the various States represented in the Bureau.

Mr. P. de Lameigné said that the simplest thing would be to pass a resolution so that the Congress might

make representations to the railway companies of various countries, and at the same time also to the Berne Bureau.

Mr. Torocanu said that the question might be divided into two parts. *Re* consideration of a technical nature, the Congress, in view of the existence of the Berne Bureau, could not pass any resolution; but as regarded the economic advantages to be derived from the use of such waggons, the Congress could pass a resolution which might be communicated to the various companies.

Mr. Stourdza said that nothing should be done before it was known what had been done at Berne.

Mr. Papon de Lameigné said that the programme which Mr. Henry had set out entitled the Congress to pass a resolution, but there was another question, and that was to ascertain whether the Berne Bureau admitted the technical conditions of the waggons in question.

Mr. Spies, general manager of the Steaua Romana Co., said that in regard to Roumania, the Roumanian Government had always done what was necessary to improve the conditions of transport, and he proposed that no resolution should be passed, and the Congress should content itself with having, by the discussion, attracted general attention to the question.

Mr. Stourdza said Mr. Henry's lecture was very interesting, but he pointed out that they were assembled to talk of petroleum, and that they should not stray away into discussions of general questions affecting railways. It was very interesting to follow the ideas set forth by Mr. Henry, but they had not to draw conclusions on questions which had not yet been sufficiently investigated by all countries and before ascertaining whether they would agree with economic conditions of the Roumanian railways.

Mr. Drago said that the type of waggon advocated by Mr. Henry was already admitted, as it was included in the classification of the Berne Conference, from the point of view of the load. The 14-ton waggon was still admissible, and they might, as regarded Roumania, investigate it and admit it there, as it was included in the provisions of the Berne Congress.

Mr. Drobrescu said that they all agreed that it was necessary to enter upon a new road, but the question was how to do it? Two days before they were engaged in making up an International Commission, on whom would fall the task of realising the resolutions of the Congress. But there was another way, and that was that the Government delegates of various countries, who were so assiduous in their labours, should report the resolutions to their respective Governments. He believed that the Bureau of the Third Section should report to the General Bureau of the Congress those resolutions in order to see what could be done.

Mr. Stourdza explained that Mr. Henry's lecture was very good, but was outside the scope of the Congress, as it was connected also with the transport of other goods.

Mr. Spies said that after the declarations of Mr. Stourdza and of Mr. Drago, and in view of the interest

attaching to the Congress, it would be better to leave the question as it was, without passing any resolutions, a proposition which was adopted.

Mr. Drago, reverting to the question, explained that he spoke only in regard to construction, but not in regard to the question of rates.

Mr. Guiselin, secretary of the French group, made the following proposition:—That the foreign groups composing the Congress, should elect from their midst three persons, who would undertake to form a National Committee, elected by all parties interested in petroleum in their country, and presided over by a delegate of the Government. The Government delegate to take no part in voting in the National Committee. All the National Committees together will form the Permanent International Committee. The Bureau of the Permanent International Committee should meet every three months in one of the four most central capitals of Europe (London, Paris, Berlin, Vienna), or even successively in each of them. The Bureau of the Permanent International Committee would examine the proposals made by each of the National Committees, will reply to them, and prepare the questions which would have to be submitted and accepted by next Congress, and which it would also have to organise.

At the sitting on Thursday, 12th September, Prof. Cronquist, delegate of the Swedish Government, read a paper upon "The Petroleum Trade in Sweden."

Prof. Cronquist gave the following figures on the manufacture of stoves and apparatus working with petroleum, oil motors and lamps:—Primus stoves, 2,600,000, at 12 francs, 31,000,000 francs; Sirius stoves 200,000 at 12 francs, 2,400,000 francs; Sivert soldering apparatus, 500,000 at 14 francs, 7,000,000 francs Advance motors, 1,400, 6,000,000 francs; Columbus motors, 300,000 francs; and Lampes de Luxe, 9,300,000 francs.

Apart from that, that country consumed 57 tank cargoes of illuminating oil, representing a value of 20,000,000 francs.

Dr. Dvorkovitz then read his paper on "The Evolution of the Petroleum Trade in Great Britain," in which the author traced the progress from the period when the country's oil trade commenced to assume commercial dimensions.

A paper was read at the afternoon sitting by Mr. A. Tolmide on "The Consolidated Lands in Roumania." During the period 1902-1907 the area of the lands consolidated in Roumania, he said, amounted to 17,077 hectares, of which 15,365 hectares were in the Prahova district. The number of applications for consolidation was 1,277. The total cost of these lands amounted to about 14,000,000 francs. This includes the value of the concessions as well as the expenses of the consolidation.

A paper was read by Mr. Hoiescu, setting out the profits made by the manufacture of illuminating oils in Roumania, and suggested the idea of a State monopoly.

Mr. L. Gaster read a paper upon the subject of "The Petroleum Lamp." He shewed the great progress achieved by other illuminants, such as electricity, etc.,

and he believed that it was a matter of great urgency to study, from an industrial point of view, the conditions necessary for a good oil lamp. In conclusion, he moved a resolution that the Bureau of the Congress should study and fix upon a type of domestic lamp offering the best conditions and greatest safety.

This resolution was adopted.

The following day a paper was read, at the morning sitting, by Mr. G. G. Danielopol, doctor at law, on "The General Principles of the Mining Legislation." The author reviewed the different systems proposed for the organisation of mining property and put the question whether, for petroleum also there should not be admitted the principle of complete separation between the surface rights and the petroleum production rights. He cited examples of legislation which admitted either the principle of separation or the system of accession. He explained the Roumanian legislation in regard to petroleum, and after indicating the advantages which would result from separation, he declared himself in favour of such step. He shewed that in Roumania when it was desired to afford greater security to petroleum concessions granted on private properties, the Roumanian Legislature was compelled to implicitly admit the system of separation.

Mr. Danielopol also explained the mechanism of the law of the 9th May, 1904, for the consolidation of petroleum concessions on private property, which had as its object to render the concession sure and unassailable. The consolidation makes the concession proof not only against the giver of the concession and his successors, but against the whole world.

This lecture was very interesting and was followed by a lengthy discussion, which extended to the question of the need for a land register for the mining regions.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM CO., LTD.—The production for the week ended November 9th, was 278,000 poods, or 4,482 tons; and for the week ended November 16th was 265,000 poods, or 4,272 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL CO., LTD.—The production for the week ended November 9th was 248,000 poods, or 3,998 tons; and for the week ended November 17th was 267,000 poods, or 4,305 tons.

SPIES PETROLEUM CO., LTD.—The output for the week ended 10th November was 149,050 poods, or 2,404 tons; and for the week ended 17th November, 153,485 poods, or 2,475 tons.

THE EUROPEAN PETROLEUM CO., LTD.—The production for the week ended 10th November was 119,875 poods, or 1,933 tons; and for the week ended 17th November was 153,459 poods, or 2,474 tons.

The Regatul Roman Company is extracting at Baicoi from five wells 50 tons of crude oil daily. This company has only one well in drilling there.

INDIA'S OIL EXPORTS DURING 1906.

According to a blue book just issued upon the trade of India during 1906, the export of all oils shewed a decline, but the greatest falling off was in mineral oils, the exports of which receded by 49.08 per cent. to 906,136 gallons, with a value of R2.3 lakhs. Similar features were reported last year; and that they are due to no inactivity in the industry is shewn by the fact that the production in Burma in the last three years has (in thousand of gallons) been:—1904, 115,904; 1905, 142,064; 1906, 137,654; while in the same period the shipments of kerosene from Burma to other Indian ports were (in thousand of gallons) 1904-5, 46,794; 1905-6, 51,680; 1906-7, 55,796. In the arrangement made two years ago between the contending oil interests, it was of course contemplated that the Indian markets should in the main be served by Burma, and the advantageous nature of the arrangement is shewn by the increase of the profits of the Burma Oil Co. to £578,155. The average declared value per gallon declined from As. 8 to As. 7-1, whereas in the United States prices hardened by some 5.25 per cent.

Exports of paraffin wax, which is classed as oil, increased by 6.01 per cent. to 60,209 cwts. with a value of R12.43 lakhs, while the shipments of candles produced from petroleum declined by 15.2 per cent. to 5,095,000 lbs. with a value of R14.21 lakhs.

THE REPORT OF THE CANADIAN OIL FIELDS, LIMITED.

The report of the directors of the above company, which was submitted to last Tuesday's meeting, stated that the production for the year amounted to 21,376 barrels, being a decline from the previous year of 5,640 barrels, resulting from the cessation of all developments, the necessity for which the directors proceed to explain.

As foreshadowed in the last report, a readjustment of the existing debenture issue of £15,000 was contemplated by means of a larger issue, and no difficulty was anticipated of being able to effect this in view of the increase of the assets since the inception of the company. Owing, however, to the extremely depressed state of the money market during the past year, the board have not been in a position to make suitable financial arrangements. Under such circumstances it has been necessary to curtail all development work on the company's properties, with the natural result of a decline in production. The board, in view of the proved oil-bearing character of the undeveloped portion of the Moore territory, propose as soon as a financial readjustment of the debenture issue can be effected and funds provided to resume active operations. Meantime the present debenture holders have been asked to postpone repayment of their debentures for the present, to which most of them have consented.

There have been some developments on neighbouring properties, and the local management have secured without payment (on royalty of one-seventh) a lease of 100 acres of well-situated land on the sole condition that two wells are drilled thereon before February, 1908. Should the company not decide to drill these wells within that time, the lease will lapse without any cost or risk to the company.

The profit and loss account, after payment of debenture interest, shews a disposable balance of £1,102 os. 2d., of which the directors propose to appropriate £250 towards writing off the formation account and to place £750 to the credit of depreciation and reserve fund, leaving a balance of £102 os. 2d. to be carried forward.

The directors conclude by regretting that the accounts will not admit of the payment of a dividend on either the preference or the ordinary shares, but feel assured that as soon as the provision of the necessary funds is made for development the financial position of the company will be speedily improved.

THE PETROLEUM TRADE OF INDIA.

AN INTERESTING CHAPTER IN THE LATEST BLUE BOOK.

On Thursday last, in the nature of a blue book, a most exhaustive review of the trade of India for 1906-7 was published, in which appears a very interesting chapter dealing with India's oil trade.

It appears that the total value of all mineral oils imported into India during 1906-7 was Rs242.7 lakhs, or 8.5 per cent. more than in 1905-6. Of this total, 80 per cent. represented kerosene.

The following figures shew the quantity and value of kerosene in thousands of gallons and thousands of rupees:—

Source.	Quantity.			Value.		
	1904-05.	1905-06.	1906-07.	1904-05.	1905-06.	1906-07.
Russia	40,304	7,761	2,249	1,62,50	27,04	9,24
United States	7,477	22,332	28,835	46,34	95,24	1,21,87
Borneo	9,281	5,193	1,423	28,74	13,17	3,56
Straits Settlements	11,969	10,391	6,213	35,75	26,58	16,13
Sumatra	5,943	5,254	10,796	18,71	15,54	33,86
Other Foreign Countries	1,216	15	3,519	5,52	11	11,51
Total Foreign Countries	76,190	50,946	53,035	2,97,56	1,78,68	1,96,17
Coastwise from Burma	42,729	47,159	61,834	1,71,26	1,62,34	2,19,50

From these figures it is seen that, excluding Burma's unascertainable internal consumption of indigenous oil, India in the last three years has absorbed some 110.6 millions of gallons of kerosene per annum, and it is known that its use is expanding. In 1904-5 Burma oil represented 36 per cent. of the total consumption. The percentage rose to 48 in 1905-6 and to nearly 54 in 1906-7.

The imports of foreign kerosene in 1906-7 have, after a marked decline in 1905-6 (which should be read in conjunction with the prices given below), advanced by some 4 per cent. to 53,000,000 gallons, with a value of Rs196.17 lakhs. The specific value per unit of imported kerosene improved by some 6 per cent.

On the other hand, the shipments from Burma to India proper increased by 31 per cent. in quantity and 35 per cent. in value.

Russia, which in 1904-5 supplied 53 per cent. of the imported kerosene, now furnishes only some 4½ per cent. Her share of the trade amounts to 2,249,000 gallons with a value of Rs9.24 lakhs, as compared with 7,761,000 gallons and Rs27.04 lakhs in 1905-6. This, of course, is due to the continuance of disturbed conditions in the productive regions; and the damage is so now great that it cannot well be quickly repaired.

On the other hand, the United States, which in 1904-5 supplied less than 10 per cent. of the total, now sends 54 per cent., her total being 28,835,600 gallons and Rs121.87 lakhs, against 22,331,800 gallons and Rs96.24 lakhs in 1905-6.

Sumatra now holds the second place with 10,795,500 gallons and Rs33.86 lakhs, which marks a cent. per cent. advance on the previous year's figures. Borneo's contribution has fallen from 5,192,600 to 1,422,600 gallons

and that of the Straits Settlements as *entrepôt* from 10,390,700 to 6,213,400 gallons.

Bulk oil, which in 1905-6 amounted to 40,883,000 gallons or 80 per cent. of the total, stood in 1906-7 at 38,321,400 gallons or 72 per cent. of the whole. Of this America supplied 47 per cent., Sumatra 21 per cent., Russia 2.8 per cent., the Straits Settlements 16 per cent., and Borneo 3.7 per cent.

Of the 14,713,300 gallons of case oil, America supplied 73 per cent., Sumatra 18 per cent., Russia 8 per cent., and Italy .04 per cent.

The following are the average prices of the leading descriptions of kerosene in Calcutta during the last three years:—

	1904-05. R. a. p.	1905-06. R. a. p.	1906-07. R. a. p.
American—			
Chester, per case ..	4 0 11	4 2 9	4 7 6
Russian—			
Rising Sun, per case ..	3 7 0	3 10 6	4 1 6
Anchor ..	3 7 0	3 6 8	—
Ram ..	3 6 11	3 9 7	3 15 10
Burma—			
Victoria, per 2 tins ..	2 12 5	2 11 6	3 3 6
Gold Mohur, ..	2 15 0	2 14 6	3 10 1
Borneo—			
Cobra, per 2 tins ..	2 14 3	2 11 11	3 5 4
Sumatra—			
Silver-light, per case ..	4 7 10	4 13 8	4 14 0

The price of American Chester declined gradually from Rs4-13-0 in April, 1906, to Rs4-6-3 in September, and after a recovery reaching Rs4-6-9 in December receded again to Rs4-6-3 in January, 1907. Victoria oil from Burma, on the other hand, rose from Rs3-2-0 in April, 1906, to Rs3-7-0 in March 1907.

In imports of other mineral oils, mainly for lubricating, there was a decrease from 10,250,500 gallons in 1905-6 to 10,152,200 gallons in 1906-7, while the quantity drawn by India proper from Burma fell away from 3,520,300 gallons to 3,006,900 gallons.

Imports of fuel oil declined from 1,329,194 gallons in 1905-6 to 352,312 gallons with a value of Rs39,118. The chief sources are Sumatra and Borneo. The receipts in Bombay fell from 436,774 to 43,368 gallons or 90 per cent., while the arrivals in Karachi declined from 613,007 gallons to 10,973 gallons in 1906-7. Madras took 276,744 gallons against 260,205 gallons in the previous year.

Lest we Forget.—No firm can become truly great without judicious advertising. Shall we send you the REVIEW's rates?

MISCELLANEA.

ANOTHER MAMMOTH FIND IN GALICIA.

"REVIEW" SPECIAL BY MR. GEO. V. KAUFMANN.

Scarcely has the district of Solotwina got over the excitement of finding the skeleton of a "Mammoth" in a wax shaft in Starunia, 14 metres deep, when two metres lower, on the 4th November, another tough customer was brought to light in the shape of a rhinoceros.

The head and one of the forelegs of this animal have come out whole. It took ten men to carry what there is of the carcase, and especially the head, which measures 32 inches from crown to forelip, with horn, ears, eye-sockets, hide and teeth all in a perfect state of preservation.

There is no question that this animal is of pre-historic origin, inasmuch as the modern rhinoceros exists only in warmer regions, whereas Galicia in winter is not much behind Siberia in severity.

The mammoth has found a home in the Lemberg Museum of Count Dziedudzicki, but the rhinoceros will probably be taken to Hamburg as the owner of the wax and oil mines in Starunia, Mr. Julius Campe, intends to present it to his native town.

BATOU M PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended October 27th, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1906.	1907.	1906.	1907.
To Europe ..	—	—	1,000	8,000
To the East ..	120,000	532,000	4,000	1,000
To Russian Ports.	125,000	1,000	12,000	8,000
From 1st Jan. to 27th Oct. :—				
To Europe ..	10,169,000	12,916,000	6,478,000	8,542,000
To the East ..	6,015,000	10,082,000	55,000	329,000
To Russian Ports	2,494,000	1,798,000	229,000	164,000

THE STEAUA ROMANA'S BALANCE SHEET.

In our last issue we referred to the balance sheet of the Steaua Romana which has been recently issued, and now we are able to supplement the information we then gave.

The number of workmen employed by the company has, it appears, during the past year increased from 3,466 to 3,739, and the number of officials from 242 to 262.

The issue of 6,000,000 francs of debentures at a premium effected during the year left a profit of 982,910 francs, which was put away in a special reserve fund.

The balance sheet shews among the assets:—Cash in hand and at bankers, 1,103,612 francs; stocks and shares, 7,159,358 francs; debtors, 3,328,078 francs; mortgages, 446,431 francs; wells, refineries, tanks, etc., 29,827,418 francs; petroliferous lands, 10,703,956 francs; and stocks of goods and materials, 9,156,162 francs.

The liabilities are:—Share capital, 30,000,000 francs;

debentures, 15,558,270 francs; reserve funds, 3,296,371 francs; pension fund, 362,519 francs; creditors, 9,143,967 francs; bills payable, 193,177 francs; and interest due on debentures, 720,026 francs.

The profit and loss account shews a gross profit for 1906-7 of 8,858,855 francs. The expenditure was:—General expenses, 1,022,322 francs; debenture interest, 807,146 francs; interest on current accounts, 435,256 francs; and depreciation of plant and lands, 4,069,047 francs. The net profit left was 2,574,251 francs.

The directors recommend a dividend of 8 per cent.

PETROLEUM PROSPECTS IN LAPLAND.

Mr. H. de Windt, who has recently started upon his expedition into the interior of Lapland in search of petroleum, tells an interesting story of how the presence of petroleum in Lapland was announced. One day a Laplander, from Samlik, called on a Norwegian merchant in Kirkenæs, and producing a bottle containing liquid, enquired if the liquid had any healing qualities. The article was examined, when it was found to be petroleum. He said the liquid spouted up from the ground in the vicinity of the Samlik mountains in great quantities. Inquiries were made, and the result was that a Paris syndicate commissioned Mr. de Windt to visit the spot and ascertain the truth of the stories. Arrangements have already been made with the Russian Government for the necessary concessions, and if oil is found the Paris syndicate will commence operations as soon as possible.

EGYPTIAN PETROLEUM CONTRACTS.

H.M. Consul at Cairo (Mr. A. D. Alban) has forwarded to the Commercial Intelligence Branch of the Board of Trade a copy of the conditions of tender for the supply of petroleum required by the Egyptian Coastguard Administration during the year 1908. The approximate quantities required will be 30 tons delivered in bulk at Alexandria, 30 tons delivered in cases of two tins of four gallons each at Port Said, and five tons delivered in cases of two tins of four gallons at Suez. Tenders must be accompanied by a provisional deposit of £ E20, which is to be completed to the amount of 10 per cent. of the total value of the contract as soon as the adjudication is determined.

Tenders on stamped paper (to be obtained from Lieut.-Col. J. H. Western, R.E., C.M.G., Queen Anne's Chambers, Broadway, Westminster, S.W.) should be delivered to the Director-General, Coastguard Administration, Cairo, before noon on the 15th December, and should be enclosed in sealed envelopes marked, "Tender for the supply of petroleum."

The conditions may be consulted by British firms at the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall Street, London, E.C.

ROUMANIAN PRODUCTION IN THE FIRST NINE MONTHS OF 1907.

A REMARKABLE INCREASE.

The total production of crude oil in Roumania during the first nine months of 1907 has amounted to 855,040 tons, as against 636,424 tons in the corresponding period of 1906, an increase of 34½ per cent.

The total production is divided among the various fields as under :—

	Nine Months, Nine Months	
	1907.	1906.
	Tons.	Tons.
Prahova District—		
Bustenari	366,504	375,836
Campina-Poiana	168,535	76,479
Moreni	225,281	106,053
Baicoi	34,684	33,552
Other Fields in Prahova..	22,342	16,041
Total for Prahova	817,346	607,961
Dambovitza District—		
Gura-Ocnitza	18,921	9,060
Other Fields	4,652	3,813
Total for Dambovitza	23,573	12,873
Buzeu District	7,547	9,033
Bacau District	6,574	6,551
Grand total	855,040	636,424

The progress of the production month by month during 1907 in the principal fields is shewn below :—

	Bustenari.	Campina-Poiana.	Moreni.	Other Fields.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.
January	44,098	10,883	19,050	7,918	81,949
February	39,928	22,394	18,505	8,266	89,093
March	41,812	21,625	22,828	12,070	98,335
April	39,263	20,800	23,373	11,762	95,198
May	40,409	19,370	29,898	19,320	99,997
June	38,374	16,452	26,385	11,500	92,711
July	43,336	18,445	28,311	11,686	101,778
August	41,024	18,024	27,761	10,616	97,425
September	38,260	20,542	29,170	10,582	98,554
Total	366,504	168,535	225,281	94,720	855,040

The production of the leading firms in the first nine months of this year, as compared with the corresponding period of 1906, is given in the following table. The remarkable advance which the Steaua Romana has this

year made in the Campina field is clearly shewn. The figures of the leading firms are as under :—

	Nine Months, Nine Months	
	1907.	1906.
	Tons.	Tons.
Steaua Romana—		
Campina	154,478	59,663
Bustenari	100,069	95,492
Other Fields	16,974	42,632
Total	275,521	197,787
Regatul Roman—		
Moreni	137,532	57,868
Baicoi	10,932	1,797
Campina	6,970	8,963
Other Fields	—	117
Total	155,434	68,745
Bustenari Co.	99,603	98,267
Romano-American Co.—		
Moreni	63,415	18,612
Bustenari	9,294	15,398
Other fields	917	384
Total	73,626	34,394
Telega Oil Co.	38,066	43,159
Trajan Co.—		
Baicoi	17,591	73
Bustenari	10,471	10,734
Campina	4,347	6,738
Total	32,409	17,545
International Co.—		
Gura-Ocnitza	17,042	7,248
Bustenari	14,672	24,299
Total	31,714	31,547
C. M. Pleyte and Co.—		
Moreni	24,334	29,573
Other Fields	347	461
Total	24,681	29,914
Colombia Co.	23,995	16,841
Aquila Franco-Romana	14,679	10,366
Secleanu Bros.	13,499	7,845
Arnheemsche Petroleum Co. ..	8,705	9,011
Naphta Co.	7,018	6,808
Galo-Romana Co.	5,015	5,085
Stefanescu and Co.	3,872	1,177
H. F. Drader and Co.	4,034	—
M. K. Ozinga	2,857	424
Olandeza-Romana	2,479	6,534
N. Stanescu and Co.	2,835	6,713
Grigorescu and Stroe	2,366	2,414
Stanislas Nuhalik	2,039	1,173
Ion Grigorescu	2,297	1,816
Van de Werk and Co.	1,984	2,930
Grigorescu and Albulescu	1,554	1,321
Louis Pasquier	1,092	1,737
Riske, Popescu and Ionescu ..	1,751	2,429
Negulescu Family	1,698	815
P. A. Naumescu	1,503	1,473
"Sofia" Co.	1,463	1,347

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THE RUSSIAN PETROLEUM AND LIQUID FUEL COMPANY, LIMITED.

DEFEAT OF A VOTE OF CONFIDENCE IN THE DIRECTORS: THEY "CLIMB DOWN."

A general meeting of the shareholders of the Russian Petroleum and Liquid Fuel Co., Ltd., was held at Winchester House, E.C., on Monday, the chairman of the company—the Hon. Evelyn Hubbard—presiding. The meeting was called to receive a statement as to the position and management of the company, and to pass such resolution in relation thereto as was thought fit.

The CHAIRMAN at the outset replied at great length to the criticism raised against the board and its policy, and then proceeded to deal with the question of the contracts, laying special emphasis upon that with the Mazout Co. He then replied in detail to certain charges made by Mr. Burke in his pamphlet upon the company, and passed on to refer in unmistakable terms of enmity to Mr. Tweedy's connection with the concern. Eventually, he came to the matter for which the shareholders had been called together. The position of the company, he said, had not changed materially from what it was in May last. The shortage of working capital then mentioned had been severely felt, and constitutes their main difficulty at the moment, while, of course, it was impossible to make use of the borrowing powers that they possessed in view of the state of the money market. The production for the year, owing to the very short output of the first six months, would probably not exceed 10 millions, or deducting fuel $7\frac{1}{2}$ millions net, and at existing prices that did not do more than cover the current Baku outgoings, leaving nothing for debenture service. The management had been doing their utmost to improve their production, and had been so far successful that the weekly figures, which averaged under 180,000 for January to July, had now got up to about 250,000. The last four weeks had given respectively 260,000, 266,000, 248,000 and 267,000 poods. The question was often asked: Why did not the rise in price compensate for the reduced production? The answer was simple—the variations were not of equal magnitude. As compared with five years ago, when they got over 30 millions net, the present year's output was as one to four. The difference in price—say 10 copecs against 25 copecs was as one to $2\frac{1}{2}$. In other words, while expenses had risen and labour demands were increasing, the value of the year's output was less by £125,000. Possibly some shareholders had not recognised what an enormous tax upon their reduced production was the fuel. They were pumping now and working at greater depth than before, consequently, they required more steam, and the amount of fuel that they used was rather in excess of what they used in former years, which told very heavily on their smaller production. They put about $2\frac{1}{2}$ millions in the year into the furnaces, and in former years that was hardly noticed; it represented perhaps one-twelfth or perhaps one-fifteenth of their production. Now it amounted to not less than a quarter of everything they produced and in the year it meant they were actually burning from £65,000 to £70,000 worth of oil. They had been looking into it as closely as they could, and he believed that there was a chance of a very important economy being made in that direction. Use was now being made of the natural gas which came from the wells, and some of the companies which were making profits had been making them largely aided by the natural gas production. The current year had given them no help at all, but the last few months had brought the output of their wells to a figure which, if maintained over 1908, would at present values cover not only Baku, but also London charges, including debenture interest, and would leave a margin over. The figure of 300,000 poods per week was, as he had said before, what they wanted to lift them out of their difficulties, and given uninterrupted work on the fields their managers hoped to attain to that before many months had passed. There was, he thought, a general consensus of expert opinion to the effect that the upper strata of the south-western portion of Group 19 had been considerably exhausted by the unprecedented amount of oil that had been taken out of them, a feature which explained why their output had been slower to recover from the effects of the strikes than was the case on some other properties. Good results might be expected at the higher levels from the exploitation of the north-eastern part of the plot, hitherto covered with buildings, and over the whole area there lay at a depth exceeding 300 fathoms and down at least to 400 fathoms fresh oil deposits, probably quite as rich as those of the upper levels, but naturally involving greater expense and difficulty in exploiting. Shareholders had, however, to clearly understand that at the present moment the most pressing difficulty is that of finance, and that the provision of further working capital before the New Year was imperative.

He perfectly understood the dissatisfaction of a great many shareholders at receiving no dividend. He felt it himself, but he also knew that there were a certain number of shareholders who considered that they wanted more direct representation on the board. If that was so, he would say on behalf of the board they were perfectly ready to accept the names of two gentlemen, provided they had got business capacity and experience and were willing to bring a fair and impartial mind to bear on the problems before the company. They were perfectly willing to admit them and to welcome them on to our board. He thought he could not say any more than that. He was very anxious indeed to get harmony restored to the company, as he was perfectly certain that was the only way the company could be saved. He would propose in that case, if the offer were accepted, to adjourn the preference shareholders' meeting for eight days, so that the new directors, if they came on, would be able to get to work on the figures and convince themselves, from the view of the financial position, that the proposals which the board were making were reasonable and, under the circumstances, necessary. Without the full support of the shareholders at large the task of carrying it on became well nigh impossible, and he for one would feel a lasting regret if they were to allow it to be said that the dissensions of the shareholders wrecked the company at the very moment that the ship seemed likely to weather the storm.

Mr. BLACK said that before the discussion opened he desired to ask the holdings of the individual members of the board in the preference shares of the company.

ANOTHER SHAREHOLDER enquired whether the large dividends paid to the shareholders did not coincide with Mr. Tweedy's managing directorship of the company. If the figures of production were wrong, how was it that the oil was sold and accounted for in the balance sheet and dividends paid out of it?

The CHAIRMAN replied that that was not the case. The inaccuracies in the production only extended during twelve months, and at that time the dividends were dwindling very much, and in the year that Mr. Tweedy's connection with the company ceased they only paid $2\frac{1}{2}$ per cent.

Mr. PEACOCK said that he for one would be very glad to accept the retirement of the whole Board. He heard the Chairman say he had been served with a writ, and if that was so, he thought his remarks about Mr. Tweedy almost amounted to contempt of court. He did not think any body of men could have carried on the business and brought it into a more helpless and hopeless condition than it was in to-day. The Chairman certainly deserved the name of "Optimist," for throughout the past five or six years, and even in the present pessimistic times, he was optimistic. If the directors were ready to test the meeting on the question of their retirement, then they ought to do it and retire *en bloc*.

Mr. GUY PYM said he very readily accepted that challenge, as a shareholder in the company who had no interest to serve either one way or the other. All he desired was that the affairs of the company should be managed in such a way that the shareholders would all get their due share of the profits. If, however, shareholders would only place themselves in the position of the directors and look back upon the past few years, they would see what the cause of the failure had been, namely, that in the country in which the oil wells were situated there were political reasons against them—economic reasons, and not commercial—and therefore it was rather hard upon the directors to say they were incompetent simply because the shareholders had not in recent years got the money out of the enterprise that they were getting some years ago. He desired to propose the following resolution:—"That this meeting deprecates the continuance of the agitation and requests the board to continue in office." (Cries of "No.")

Mr. HERALL asked what was the exact nature of the proposal that was in the background. Could they not be told what it was?

The CHAIRMAN: That is for the next meeting.

Mr. A. L. LEVER, M.P., then addressed the meeting. He said they had all listened with patience to the Chairman's irrelevant speech, for he had devoted a good deal of time to a denunciation of Mr. Tweedy on the one hand, and a dissertation on a pamphlet by Mr. Burke, on the other. He (the speaker) was in no way responsible for that pamphlet, having had nothing at all to do with it. At any rate, Mr. Burke was man enough to champion his own cause. What they had met for was to hear particulars as to the condition and the management of the business. In company with three other gentlemen he had an interview with the chairman, and

in the most forcible language he could command he told the chairman that he dissociated himself altogether from Mr. Tweedy and had nothing whatever to do with him. The chairman suggested that two of them should join the board, but they refused because they felt that unless they had a majority on the board they would be absolutely useless. The chairman then asked them whether they would pledge themselves to have nothing whatever to do with Mr. Tweedy. His reply was that they had open minds and would pledge themselves to nothing with regard to the future. He had only joined in the present agitation in consequence of rumours he had heard in the City and because information for which he had asked had been denied him. Personally, he considered that the meeting of preference shareholders should have been held before the present meeting, but for some reason best known to themselves the directors had refused to fall in with his suggestion. It was certainly a great hardship that the preference shareholders' meeting should be adjourned, because the expense falling upon those connected with the agitation came out of their own pockets, whereas the costs to which the company was put came out of the company's exchequer. It was quite natural that the preference shareholders particularly should be dissatisfied, because in the first four years of the company's existence enormous dividends were paid to the ordinary shareholders—namely, 42 per cent., 20 per cent., 50 per cent. and 30 per cent. respectively, making in all 142 per cent., whereas the preference shareholders only received their 6½ per cent. per annum. Seeing that the ordinary shareholders had received all that money, was it to be expected that the preference shareholders were going to acquiesce in the suggestion now being made without there being a proper safeguard? When his friends and himself met the chairman they asked that a committee of investigation should be appointed or that they should have a majority on the board, but both these requests were refused. Two seats on the board were offered, but these they declined to accept. He certainly could not fall in with the views of the chairman in view of the optimistic nature of his previous speeches. Mr. Lever then proceeded to quote extracts from certain recent and optimistic speeches of the chairman, and said that even after the circular of June 19th, 1906, the directors soon came, cap in hand, asking the preference shareholders to forego what they always thought was a fund for their special benefit. He found that in 1905 the company made a loss of £44,000 and in 1906 a loss of £77,934. In the latter year nothing was written off for depreciation, and if they made a similar provision to that made in the previous year, namely, £15,536, that would bring the loss in 1906 up to £93,490. If the directors were going to continue the business on the same footing and under the same circumstances as in the past, it would not be very long before the company would be in the hands of the liquidators. Then why should the company be in its present position, seeing that prices had been ruling higher than ever before in the history of the oil trade? Up to 1903 the price of oil was only 10·3 copecks per pood, and yet they were paying dividends. In the next three years the average price of oil was very nearly double, and yet the result was that they made big losses. The reasons for this might have to do with the management, and it seemed to him that the time had arrived when some drastic changes should be made. It was not correct to say that the companies generally had not been paying. Possibly that was so in the case of the companies with which Mr. Urquhart had been connected, but there were other companies in which Mr. Urquhart had had no finger in the pie, which had been paying substantial dividends during the past three years. For example, he would take the Caspian Society, which during the past three years had paid dividends of 30 per cent., 15 per cent., and 25 per cent. respectively; then there was the Baku Naphtha Co., paying for those years dividends of 20 per cent., 20 per cent., and 37½ per cent.; Nobel Bros. paid 10 per cent., 12 per cent., and 18 per cent.; Mirzoeff Bros. paid 15 per cent., 8 per cent., and 25 per cent.; and the Moscow-Caucasian Co. paid 25 per cent., 20 per cent., and 25 per cent. And so he could go on giving those large dividends, whereas they had incurred losses. Now for his own part, his belief was that the ruin of their company had been the Nobel-Mazout contract. He did not know who was responsible for that contract, but he did not think Mr. Burke was far wrong when he said it was draining the life blood of the company. As far as he had been able to reckon it, the difference between the price realised under that contract and the price which would have been realised if the oil had been sold in the open market during the last three years had been over £400,000. Therefore, he did not think it was at all surprising that he asked for an inspection of the document in order to ascertain whether it was in the interest of the company to continue the contract or whether it would not be advisable to get out of it. That committee, however, was refused. ("Shame.") But we have been told by the manage-

ment that an arrangement has been made for the reduction of the oil under that contract and that that arrangement has been made upon favourable terms, yet we do not know the particulars. That was what they wanted to know. The great question, however, was whether the company could be restored to prosperity; in his view it was possible to do something at any rate to ameliorate the condition of things. It would not do for him to say exactly what the plans of his friends and himself were at the present juncture, but he would say that if prosperity were to come to the company he was convinced it could not come by continuing as they were; it must come through new channels and through infusing a little fresh life and energy into the board of directors. They all knew if the company continued upon its present footing it would go into liquidation. Personally, he had written off his shares a long time ago, yet the agitation wanted to make an honest endeavour to improve the company. The chairman had said there had been a committee of inspection, but that committee was appointed simply for the purpose of inquiring into specific allegations which were made against members of the board. It was not a committee of investigation as to the management of the conduct of the business. Moreover, he understood that Mr. Douro Hoare, one of the members, was in some way connected with the members of the board. He did not want to say in what way, but he could assure the meeting that he was. He had been given to understand that when the company was found to be in a bad position a committee of management was formed among the directors. Well, as they had not been able to do any good, why not let somebody else try?

Mr. BURKE said that in justice to himself he desired to say a few words. Mr. Lever had gone over the ground very thoroughly, but in connection with the Mazout contract the Chairman had brought it as a charge against him that he had said the company was bound hand and foot under it. That, however, was not what he had said, but what the Chairman had himself stated. He had said that as regarded marketing and sale prices in the interior they were absolutely in the hands of the Mazout Company. Well, if they had many contracts which placed them, so far as sale prices were concerned, absolutely in the hands of a competing company, he contended that it was handing themselves over hand and foot. He could only say that what he had written he had written, and he would stand by it.

Mr. WHIFFIN asked why this company did not apply for protection from the Russian Government, as other companies did? Had their company been equal to the others, they would do as the others had done.

Dr. DVORKOVITZ said that when the strikes occurred in Baku other leading companies—Messrs. Mantascheff, the Caspian Society and others who had contracts with the Mazout Co.—fell back upon the *force majeure* and cancelled the agreements, and that was the reason they were now able to pay large dividends. Then why had not their company applied the *force majeure*? The reason was that £80,000 had been paid in commission in order to drive the company into that agreement. That commission was for ten years at £8,000 per year, and Mr. Urquhart knew all about it. All the other Russian companies had used that *force majeure*, and their company was ruined because they had not.

The CHAIRMAN, in reply, said the holding of Messrs. Hamilton, Smith, Baddeley, Moore and Ogilvy in the company's preference shares amounted to 7,090. Together with this firm and his family he himself held 19,876, which he thought was a pretty substantial holding. (Hear, hear.) Mr. Luden represented 61,000 preference shares. With regard to the statement of Dr. Dvorkovitz it was most unfounded. This company did not pay a single farthing to anybody under that contract.

Dr. DVORKOVITZ: I never said you did. I said it was paid—this £80,000—in order to drive your company into the contract.

The CHAIRMAN said that he could assure the meeting that Mr. Urquhart did not have a single penny commission, and for Dr. Dvorkovitz to say what he had behind that gentleman's back was not English.

Dr. DVORKOVITZ said he did not say that Mr. Urquhart had had any commission. He could, however, give the name to a committee.

The CHAIRMAN proceeded to say that with regard to the statement by Mr. Lever as to there having been a loss of something like £400,000 during the Nobel-Mazout contract, he (the chairman) had not calculated what would have been the result of selling on the market or selling in the interior, and no one could possibly make such a calculation. If they sold at Baku they must take the price ruling at Baku. When there was an abnormal shortage in Baku, probably prices there would rule above those in the interior, and the reverse would be the case when there was a full production. As far as they could judge, they did not get last year an equivalent

of the Baku prices, but as far as they could judge they were getting almost exactly the equivalent this year. Business men, however, would realise that under a contract that ran for ten years they could not expect to win every year. He believed that the Nobel Co., whose reputation was world-wide, were treating them absolutely fairly in the matter, and that they were sharing to the full the prices that company realised. If they stood by that contract, he believed it would give them very good results in the future, in spite of what they might call his optimism. With regard to the question as to why they did not apply for protection after the strikes, the answer was that they did apply. He went personally to the Foreign Office several times, and Mr. Urquhart, in his position as Vice-Consul, did all he possibly could to get protection. Failing this they offered to arm their own men and fight their own battle, but the Russian Government refused to allow their guard to be armed. He believed that if they had been armed they would have given a good account of themselves.

Mr. BURKE said that during the five years of Mr. Tweedy's management there was a profit of £1,483,995, or an average gross profit of £296,799 per annum. Last year the company made a loss of £77,934. Those figures were facts from which they could not get away, and they spoke volumes.

Mr. PEACOCK said that after the recent experience they had had he begged to move a vote of no confidence in the present directors, and that steps be taken to fill their positions, a special meeting to be called for the purpose.

Mr. NICHOLAS said he would second such a proposition.

Mr. LEVER said that, as there was no reason for such a motion, he suggested that the shareholders should refrain from voting. What they were concerned in was the proposition being put before the preference shareholders to appropriate £52,000 to pay debentures, and he was glad to say that his friends and himself had sufficient proxies to defeat that proposition.

The vote of confidence in the board, which so far had remained unseconded, was then seconded by Mr. PENNELL, and the amendment was withdrawn, it being pointed out that that constituted a direct negative.

Upon a show of hands it was seen that there was a large majority against the board.

A poll was then demanded by one of the directors, and taken, Mr. Lever urging the shareholders not to vote at all.

The Chairman created much laughter by declaring the poll overwhelmingly in favour of the board.

A meeting of the preference shareholders was afterwards held for the purpose of submitting the following resolution:—"That the board be and it is hereby empowered to apply from the investments of the preference shareholders' reserve fund any sum required not exceeding £52,500 to the redemption of first debentures on or before 1st January, 1908."

The CHAIRMAN said he proposed to ask the shareholders to adjourn the meeting, because the vote was a very important one, and one that might be decisive as to the future of the company. The company had undoubtedly accumulated a large fund which was of no use to them as preference shareholders under the articles, and the position was: could they make any better use of assets than by paying debts? If they did what the board proposed, and if they released £52,500 in the form of an advance, they would enable the sinking fund of the debentures to be paid off, and they would then be able to continue their interest in the preference shares. It is very evident that if they allowed the company to default on the service of their debentures, the debenture holders might themselves take action and the company might pass altogether out of their control. The Chairman concluded by stating, I propose with your consent to adjourn this meeting for eight days—until the same hour, 2.30 p.m., on Tuesday of next week. In the meantime I will invite any two gentlemen of business habits who may be nominated to come and confer with the board, who will explain to them the whole financial position. That would be far better than taking, under feelings of a rather militant nature, a vote which may be destructive of your own interests. I am speaking now what I believe to be my own interests, which are exactly the same as yours. I therefore propose this adjournment, and ask you to select two gentlemen who shall represent you in this matter. We will then shew them exactly what the financial position is, and at the adjourned meeting they will be able to advise you whether the proposition which we are making is reasonable and necessary or not. I can make no fairer proposal than that. I will simply move that this meeting stand adjourned until 2.30 p.m. on Tuesday of next week.

Mr. F. M. OGILVY seconded the motion.

Mr. PEACOCK said many shareholders had come from a considerable distance, and in their interest he thought the matter

should be decided at the present meeting. Why should they let that £52,500 go into an abyss, as the other money had gone?

The CHAIRMAN said the directors were not asking the preference shareholders to allow the money to go into an abyss. It would be used for the specific purpose of discharging a liability to the debenture holders that must be met if the company were to go on. The preference shareholders surely wanted to save the company if possible. The directors had given the company every chance of keeping alive. The oil business was of a speculative nature. They had seen before what an enormous change had been made in a short time by a considerable improvement in the production. Theirs was a very valuable plot, and he was perfectly satisfied that within a few months they might recover to a point which would once more put it on the up grade. He would not put it higher than that. He certainly did not think they could apply to a better purpose than paying off debentures, an asset they could not otherwise touch. If the proposition were agreed to, confidence would be more or less restored.

Mr. LEVER said the board had overlooked the fact that they were asking the preference shareholders to give up £52,500 out of a special fund that they had always thought was in the hands of trustees for the benefit of the preference shareholders. The directors were not telling them what they were to receive in exchange, which was the all-important point. There was no disguising the fact that next year the chairman would have to come again and ask for another dole, and perhaps it would be to the advantage of the company to grant it; but if the shareholders were to do this, surely it was only reasonable and right that they should expect something in return. They had asked for a committee of investigation, which had been refused. They did not seek positions on the board, but two were offered, and they then asked that they might have a majority on the board. Possibly two would be ample, provided the number of directors were decreased so that two would be a majority.

The CHAIRMAN said Mr. Lever had asked what was to be given the preference shareholders in return? Well, the offer made was a very fair one, for two seats on the board, as he had already pointed out, would be more than the opposition were numerically entitled to. If there were a demand for representation on the part of the shareholders, the directors were quite willing to give it to them. Mr. Lever, however, made a mistake when he talked of a majority on the board, because he (the chairman) was perfectly satisfied that if two gentlemen of business capacity, who were impartial men, joined the board, they would find their colleagues were perfectly open to any suggestion they might make.

Mr. McCONKEY said that if that £52,000 were taken to pay debentures, the company would be still without capital. Did they intend to have another issue of debentures? If so, it might have some weight with the preference shareholders if they were told they would have the option of taking up any debentures which might be issued.

The CHAIRMAN replied that the suggestion just made was exactly the kind of suggestion which might well be considered.

After other discussions the motion for adjournment was then put and carried.

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.)

APPLICATION FILED IN GREAT BRITAIN.

Improvements in or connected with Combustible or Carburetted Liquids Employed in Internal-Combustion Engines, and for Lighting and Heating.—Charles Poulain, 23, Southampton Buildings, London. No. 25435 of 1907.

APPLICATION PUBLISHED IN GREAT BRITAIN.

Improved Means Applicable for Use in the Emulsification of Oils.—Lewis Edward Common, of Sutton-on-Hull, and The Hull Oil Manufacturing Co., Limited, of Stoneferry, Hull, both in the county of York. No. 23768 of 1906.

This relates to a process applicable for use in the preparation of an emulsifier, the same consisting in sulphonating castor or other oil, fat, or oleine, and then completely saponifying it with soda or other suitable alkaline agent.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	$\frac{9}{16}$ - $\frac{11}{16}$
Baku Russian Petroleum ..	£750,000 Ord.	£1	$\frac{2}{3}$ - $\frac{2}{9}$
"	£650,000 5½% Pref.	£1	$\frac{4}{10}$ - $\frac{4}{6}$
Bibi-Eybat Petroleum Co. ..			$\frac{1}{4}$ - $\frac{5}{8}$
Californian Oilfields ..	£250,000 Ord.	£1	$\frac{4}{4}$ -5
Commonwealth Oil Co. Pref	18/- paid up (Prem.)		par $\frac{1}{8}$
" Def.	£1 fully paid		$\frac{1}{8}$ - $\frac{1}{8}$
European Petroleum ..	£550,000 Pref.	£1	$\frac{1}{10}$ - $\frac{2}{10}$
"	£550,000 Ord.	£1	$\frac{0}{6}$ - $\frac{1}{6}$
"	£376,000 Deb.	£100	70-74
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	$\frac{2}{10}$ - $\frac{3}{10}$
"	£600,000 Ord.	£1	$\frac{3}{10}$ - $\frac{4}{10}$
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	$\frac{1}{1}$ - $\frac{1}{4}$
"	£575,000 Ord.	£1	$\frac{2}{10}$ - $\frac{3}{10}$
Shell Transport & Trading ..	£2,000,000	£1	$\frac{38}{10}$ - $\frac{40}{10}$
"	£1,000,000 Pref.	£10	$\frac{9}{8}$ - $\frac{9}{8}$
Spies Petroleum Company ..	£312,500	10s.	$\frac{5}{13}$ - $\frac{6}{13}$

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Nov. 18th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	510	512
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,250	4,300
Mazout Co.	250	400	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	151	153
Neft Co.	250	—	—
Nobel Bros.	5,000	10,350	10,450
"	250	—	—
Rops and Co. V... ..	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaleff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading			
Co.	250	—	—
" (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£1 19s. 6d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 5s. od.
Burmah Oil, Ord.	£1,100,000	£1	£3 4s. 3d.
Do. Pref.	£250,000	£1	£1 5s. od.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£6 15s. od.
Do. 5% Pref.	£18,900	£7	£4 13s. od.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 17s. od.
" (17s. paid)			
Pumpherton Min. Oil Co., Ltd., Ord.	£110,500	17s.	£12 18s. 9d.
Do. (17s. paid)			
Do. 6% Cum. Pref. ..	£100,000	£10	£13 os. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 18s. 6d.
Do. 6% Cum. Pref. ..	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 9s. 6d.
Do. "B" Deb.	£150,000	£100	£165.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins.
Arnhemsche Petroleum Mij.	—	1,000
Aurora (Deb. 5%)	—	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	124	50
" (Deb. 4½%)	100	1,000
Gaboes	—	—
Holl. Rumeensche Petroleum Mij. ..	16½	1,000
Int. Rum. Pet. Mij.	80½	500
Java Petroleum Mij. (Ord.)	—	1,000
" (Pref.)	14½	—
Koninklyke Nederl. Pet. Mij. Shares ..	248½	250-1,000
" Share certificates ..	247½	1,000
Mœara Enim Petroleum Mij.	123½	100
" 1-1,000 Oblig. 5	—	250-1,000
" Moesi Ilir " Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij. ..	5	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	45	—
" (Deb. 5%)	—	—
Panolan Maatschappij Cert.	—	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	110	1,000
" (Common)	—	—
Sumatra-Palembang Petroleum Mij. ..	80	500
Tarakan Petrol Mij.	30	—
Zuid Perlak Petrol. Mij. (Pref.) ..	67½	—

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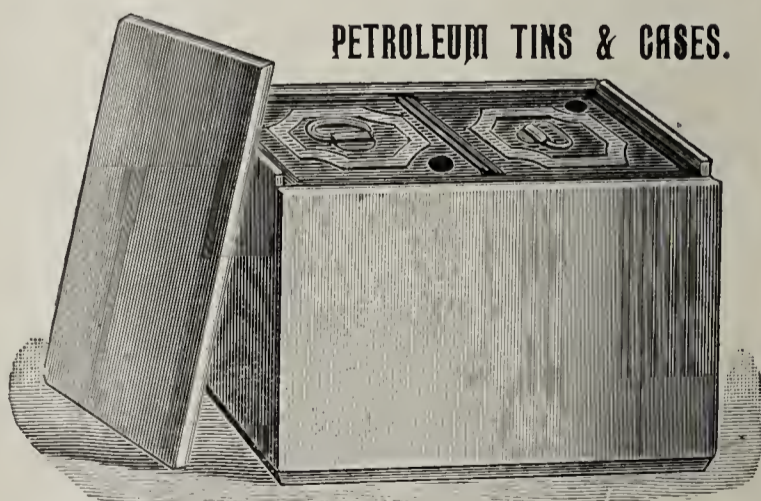
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SATURDAY, NOVEMBER 23RD, 1907.

THE RUSSIAN PETROLEUM AND LIQUID FUEL COMPANY, LIMITED.

THERE are, I feel sure, many like myself, who having a sincere desire to see the petroleum industry and all that appertains thereto prosper, deeply deplore the ignominious downfall of our Anglo-Russian oil companies.

It has long been placed upon record that "'Tis not in mortals to command success," etc., and those who have closely watched the petroleum industry in different parts of the world grow to such gigantic proportions are well aware of not a few honest yet unsuccessful attempts that have at various times, and on the part of several concerns, been made to bring about a successful career. I am one of the first to admit that at the best, the petroleum business is somewhat speculative, and in the earlier days—when the industry was more or less in its infancy—those investors who became associated with oil enterprises with the idea of drawing large and continuous dividends must also have been prepared for disappointments. There have, as I say, been some companies whose sincere and honest attempts in making a bid for success have been frustrated, and whose career forms

now but sad lesson associated with the earlier days of the oil industry.

But far removed from the category of concerns to which I have referred stand our Anglo-Russian oil companies, prominent among which is that of the Russian Petroleum and Liquid Fuel Co., and it says little for the business aptitude of some of our City men that a company which at one time had a future of such promise should by a sudden change of policy and management have fallen to such low depths.

But the day of reckoning is at hand, as was evidenced by the meeting held this week, when the shareholders were called together in order to hear a statement as to the position and management of the concern. Let me here candidly say that I am very much surprised that a body of shareholders such as attended the meeting this week could possibly tolerate the attitude displayed toward them by a board which now appears to have lost all dignity or self-respect.

From a practical and business point of view the meeting was a pure fiasco. By a sheer effort, worthier of a nobler object, the chairman of the company managed to direct the attention of the shareholders from the real points at issue, by, as one shareholder put it, "dragging a red herring before them." In the first place, he offered wholesale and certainly libellous condemnation of the company's former manager—Mr. Tweedy—and thereby shewed that, regardless of the beam in his own eye, he endeavoured to ridicule the mote in his neighbour's. To go deliberately out of his way to throw mud at a former colleague on the board is but one of the unprincipled actions of which the Hon. Evelyn Hubbard has been guilty.

Still, in spite of such a cowardly attack that was at that meeting made upon him, Mr. Tweedy has by far the balance of confidence and respect in his favour, for not even the chairman has ever dared to suggest that Mr. Tweedy misappropriated the company's funds—and it is the financial question that concerns the shareholders. Facts are stubborn things, and it will take the shareholders a long time to forget that it was only during the *regime* of Mr. Tweedy as managing director of the company that they received almost 150 per cent. interest upon their holdings. Not all the empty and gullible eloquence of the company's chairman can put this fact in the background.

But the attack upon Mr. Tweedy was not the only irrelevant matter which went to make up the chairman's red-herring speech of an hour. He saw fit, too, to attack Mr. W. Henry Burke, a prominent shareholder, whose pointedly-written brochure upon the brilliant past, the present degradation, and the hopeful future of the company, has done so much to gain for the shareholders a voice in the management of their company. Still, the fact remains that in that pamphlet there is far more truth and common sense displayed than ever the company's chairman has been "guilty" of.

Of the real state of affairs in connection with the company, however—and that is what alone interests the shareholders—the meeting gained no reliable or even explicit information. I always would admire and respect the man who, apart from everything else in times of misfortune is honest to himself, his colleagues, and

those who have placed trust in him. Yet in the present case, there is no admiration nor respect. The shareholders have yet to learn the truth. Let me tell it in a few words. It may be that this hopeful future of which we have been told by the company's chairman may possibly be brought about, but through channels other than those of the present board. That is, at the best, being very prophetic: the questions which concerns the shareholders most is the position to-day. Here it is. The company which under able management yielded over 160 per cent. dividend, is now on the brink of bankruptcy. It is, I might almost say, hopelessly involved, and it will be only by the strongest effort on the part of those who are engineering the agitation that it will be pulled through. Liquidation is the one thing which plainly looms in the distance, and if it does, then the company's history may well be handed down to future generations of an example of how, in this twentieth century, honest people allowed their purses to be plundered by city men, who, beneath their vaunted dignity and high-sounding titles, were guilty of the most contemptible trickery conceivable.

And now a word as to the statement I made to the meeting, and which, following the usual order of things, was deceitfully misinterpreted by the Chairman. The statement I made was one of fact, to the effect that to get the contract with the Russian Petroleum Co. through, the Mazout Co. paid a commission of something like £80,000. I did not even suggest that Mr. Urquhart had this, and yet the Chairman, apparently afraid that the truth might have to be given from his lips to the shareholders, replied that their company had not paid a single farthing commission upon that contract. Here the Chairman—either wilfully or through ignorance—misled the shareholders, and endeavoured to convey a totally wrong impression of my remarks to the shareholders. I again state that the money was paid, and since one firm does not pay so substantial a sum out of its own pockets, it naturally follows that to this extent at the least, the Russian Petroleum and Liquid Fuel Co.'s shareholders have been bled.

Now one last word. The Hon. Evelyn Hubbard accused me—though I can't see why—of being un-English because, he said, I attacked a man who was not present to defend himself. As a matter of fact, I did not attack any individual, and consequently his remark did not apply. But let me turn the tables, and ask the company's Chairman if it was English for himself to make so cowardly an attack upon his former colleague, who was not present? Is it English to float a company as the Hon. Evelyn Hubbard has done, and rob the public of something like half-a-million in promotion money, and then drag the company to disaster, as though two wrongs would make a right? Is it English to assist fellow directors as he has done, to take exorbitant commissions, both legal and otherwise, from a company of which he is supposed to be the trustee and guardian? Is it English, because a director and manager will not condescend to his base actions, to dismiss that gentleman, and substitute in his place a man who by his utter inability has wrecked to the verge of bankruptcy another company? Is it English to create a company in Holland and upon the unsuspecting Dutch folk sell shares at a premium, and then by a decidedly dishonest arrangement to stick to the voting power of those shares? If the Hon. Evelyn Hubbard considers that all this is English, then I must frankly admit that I am proud to claim myself as being un-English.

P. DVORKOVITZ.

Almanest,
cu

The Roumanian Petroleum Industry's Greatest Friend.

A TRIBUTE TO MR. C. ALIMANESTIANU.

The title of this article appropriately describes the value of the work achieved by Mr. C. Alimanestianu for the future success of the Roumanian petroleum industry. The numerous delegates from all parts of the world to the Third International Petroleum Congress held recently at Bucarest must have been forcibly struck not only when the remarkable energy possessed by Mr. C. Alimanestianu, who officiated as the general secretary of the Congress, but by the assiduity with which, in and out of season, he puts forward the claims of the Roumanian petroleum industry, and upon each and every occasion does such yeoman service in the cause of future progress and success for the industry.

The consistency with which Mr. C. Alimanestianu has worked for the general welfare of the petroleum trade, and especially for that of his own country, has been illustrated at each of the three petroleum congresses which have been held in Europe, but without a doubt, it was at the most recent—that at Bucarest—that his sincerity and enthusiasm came in for the greatest amount of attention, for his labours impressed one and all with the fact that, in him, the Roumanian petroleum industry has one of its greatest—if not its greatest—friends.

His stirring speeches at each of the convivial gatherings held in connection with the Congress were most convincing, and to us it has been a source of regret that the majority of our contemporaries have not devoted more space to recording such weighty and forcible remarks as those which met with so cordial a reception at the whole of the social gatherings in Roumania during September.

It may not be out of place if we here give a *resumé* of some of the principal speeches delivered during Congress week by Mr. Alimanestianu.

At the first banquet given on the 9th September, it fell

to the lot of Mr. Alimanestianu, who is the President of the Roumanian Petroleum Association, to reply to a hearty toast, which had been submitted in honour of the association, and it was here that he made a few remarks upon the petroleum industry, which are full of significance.

He pointed out that petroleum as a fuel, already possessed a capital importance in Roumania. For its exploitation Roumania had addressed itself to foreign capital, and to the experience and knowledge of foreigners. Englishmen, he said, had the Flemish as

their masters in industry. The Germans, the English, and consequently also they in Roumania were indebted to many peoples. But they had received them all with open arms, considering them as honest and dignified collaborators, for only an industry based on a dignified, honest and fruitful collaboration between the national and foreign elements could survive.

There was one very delicate point in the organisation of the Third International Petroleum Congress, for from the discussions of the Congress it was made clear that the institution of such gatherings was of great interest for certain producers and manufacturers of

goods in large quantities, which were placed upon the world's markets.

At the banquet given to the Congress by his association, Mr. Alimanestianu said that what they in Roumania most desired was conscientious and honest collaborators, in order that all should have a large profit and material advantages. Otherwise harmonious work was impossible. In the beginning there were all the difficulties inherent to all commencements, but everything was now shaping itself toward a better future, and he was very happy to be able to there express all his gratitude to the managers of the large companies and small enterprises and to the technical managers for all that the industry owed to them. The assistance



which the large companies had given the industry in accomplishing the heavy task of that work was very great.

At the conclusion of the convivial gathering at Constantza, Mr. Alimanestianu proposed the health of the President of the Congress—Mr. Saligny—in most eulogistic terms, and also referred to his own interest in the Roumanian industry since he went to the country. He said that without the great competence, without the knowledge and experience of the Congress President—Mr. Saligny—it would have been impossible for the Association to have offered the delegates, and more especially to bring to a successful end, the organisation which the delegates had been kind enough to refer to so many times. It was the more pleasant for him to make that confession because the work under the direction of Mr. Saligny brought back to his mind dearly-cherished memories. When he arrived from abroad, 15 years ago, it was under the direction of Mr. Saligny that he began his career as assistant engineer in the widening of the Bacau-Piatra-Neamtz Railway. In 1897, when after a long opposition on the part of their railways they at the Mining Department commenced the propaganda in favour of increasing the use of lignite impregnated with petroleum residuals, as a national fuel, it was always under the distinguished direction of Mr. Saligny, as Director General of Railways, that they came to obtain the first contract ensuring for ever the use of lignite and petroleum on the Roumanian railways.

To-day, when it was a question of greatly widening the circle of their industrial activity and of opening up a vast field for national labour, fate had decreed that it should likewise be Mr. Saligny, who presided over that work of such great economic and cultural importance. He hoped that Providence would grant to Mr. Saligny long life so that he might lead them to still wider and wider horizons in the application and manifestation of our national labour.

It is said that of men "by their works ye shall know them," and it is in this light that we look upon Mr. Alimanestianu as one of the greatest friends of the Roumanian petroleum industry.

THE USE AND ADVANTAGES OF OIL FUEL UPON STEAMERS.

In a dissertation for the Degree of Doctor-Ingenieur, recently presented to the Technical High School at Berlin-Charlottenburg, Ernst Foerster examines the question how the adoption of oil fuel could increase the carrying capacity of mail boats and improve the service in general. That the modern fast boats, which surpass all their predecessors in dimensions and swiftness, are fitted with coal-bunkers and furnaces is perhaps not so much due to the high price of oil—though this has risen very considerably of late—as to the uncertainty of the price. Liquid fuel is used on many vessels of the navies and merchant services; the Wallsend Slipway and Engineering Co., of Tyneside, alone has already fitted a hundred steamers with oil tanks and furnaces. Including steamers on the Russian lakes and rivers, Mr. Foerster estimates the number of oil-burning steamers in regular service as between 1,200 and 1,500.

The first experiments made with oil sprayed by steam,

Mr. Foerster points out, were not successful. The steam was wasted, and the long pointed flames burned the boiler plates locally. The rapid cooling consequent upon shutting off the oil was another drawback. The latter trouble was very simply overcome by the Shell Transport and Trading Co. by keeping the tubes closed so that their hot gases could not escape after stopping the fire; and the Körting oil nozzle, which does not waste any steam, and secures a uniform heating free of blow pipe effects, has proved a complete success, both on Continental and British vessels. One point requires further chemical investigation. According to Mr. Foerster, the chief oils that are at present fired under marine boilers are Texas and Borneo oils; Russian oils remain mostly in that country. The Texas oils contain up to 0.75 per cent. of sulphur, and it is not yet settled whether or not the formation of iron sulphide on the tubes and furnace walls may in the long run have any serious consequences. So far none have been observed. Comparative tests conducted by the Hamburg-America Line on the "Segovia," the "Ferdinand Laeisz," and the "Sithonia," shew that 0.49 kilogramme (about 1 lb.) of oil is consumed per indicated horse-power-hour on board, including the auxiliary machinery, against 0.68 kilogramme of best coal.

In order to arrive at some comparative figures, Mr. Foerster takes the "Deutschland" (displacement 23,200 tons), and he shews by diagrams how the oil tanks, pumps, boilers, etc., should be arranged to the best advantage. Tanks between the double bottoms, with pipe lines extending the whole length of the ship, he does not advocate. On the other hand, he would partly utilise the double bottom for oil storage, since it is very difficult to prevent leakage into the compartments underneath high tanks. The tanks should not go right up to the shell of the vessel. Proper expansion trunks should be provided on the top of the tanks; lateral water-separator tanks would also be needed, and should be fitted with steam coils. Vertical pumps should be erected in pairs in the stokehold, and the pipes should be carried underneath the main deck to the sides of the ship, running next to the shell down to the intermediate deck, and then along the upper edges of the transverse tanks. Having gone into particulars, the author concludes that his oil bunkers would weigh 3.3 times as much per ton of fuel as coal bunkers. But he would considerably save in space, and, further, in stokers. He calculates that 12 first-class stokers and 48 men would suffice with oil furnaces, against 12 first-class stokers and 180 men with coal furnaces, and a good deal of further space would thus become available for passenger accommodation, especially in the second and third classes. The number of possible passengers would be raised from 1,287 to 1,619, and thanks to the reduction of the number of stokers and the increased cargo capacity, there would be a substantial rise in the profits, assuming an average utilisation of the available space of about 60 per cent.

The summary is favourable to oil fuel, and the discussion of the stability problems likewise leads to a favourable solution. The advantages which a fuel like oil offers the Navy have long been recognised. Warships are enabled to increase their radius of action, while the draught of the vessels can be diminished, so that shallower waters and docks can be entered. The question of draught is of equal importance in the merchant service. It is not only on account of the brisk traffic that the swift giant ships of the last years have all been built for the Liverpool-New York mails. Very few ports offer channels of sufficient depths to vessels of 34 feet draught, and even in New York we have practically reached the limit. Hamburg and Bremerhaven cannot accommodate steamers of more than 31 feet draught. Only some far-going modification in ship construction, such as the adoption of oil fuel involves, will enable those ports to despatch vessels of equal capacity. Thus a coal-burning ship of 34 feet draught, 38,000 tons, and 68,000 horse-power, steaming at 25 knots, could be replaced by a boat of 31 feet draught, 34,600 tons displacement, and 64,000 horse-power, steaming at the same speed and affording as much profit-bringing space.

CANADIAN OIL FIELDS, LIMITED.

ANNUAL MEETING OF SHAREHOLDERS.—ENCOURAGING SPEECHES.

The annual meeting of the shareholders of the Canadian Oil Fields, Ltd., was held on Tuesday last at Winchester House, E.C., the Chairman of the company—Major-General Sir W. HENRY R. GREEN—presiding over a large attendance of shareholders.

The Secretary—Mr. H. J. HARDY, F.C.I.S.—read the notice of meeting and report of the auditors, the annual report of the directors being taken as read.

The CHAIRMAN, in moving the adoption of the report and balance sheet, said at the outset that the board very much regretted that the report was not of a more favourable character, that being the first occasion on which they had had to pass their preference dividend, to which matter he would make further allusion later on. There had been a considerable falling off in the production of oil, namely, from 27,016 barrels last year to 21,376 barrels for the financial year ended June last. That shewed a shrinkage of 5,640 barrels, 3,588 of which was due to a natural falling off in the production from their Moore plot. Of course, oil producers never expected the initial pressure to be maintained, and there was only one way in which production could be kept up, and that was by constant boring. They had fortunately in the Moore plot a splendid area awaiting the drill, but circumstances had been against them in providing fresh funds to continue active operations. They had therefore not been able to keep up the production, although past results at Moore had been extremely gratifying.

The falling off in the old wells for the past year had been about 13 per cent., and that was to some extent due to the pernicious practice of gas pumping, which could only be described in a single phrase as "begging your neighbours." If their neighbours insisted upon gas pumping from adjacent plots, and thus taking away some of the vital energy, they could not but follow suit. Many conferences had been held to put an end to that practice, and they were hopeful that there would be considerable diminution in the future by mutual arrangement.

The sale price of the oil had averaged from \$1.82½ to \$1.88½ per barrel, inclusive of the Government bounty, and he did not think they needed to anticipate any falling off in the demand, which was greater than the supply on account of the great increase in all departments of trade in Canada and the constant influx of settlers.

It would naturally occur to the shareholders to enquire whether anything could be done to reduce expenses, but he needed scarcely to say that that important aspect was constantly before them. There was a point however, below which their standing charges could not be reduced; while, on the other hand, additional wells thrown on to the jerker lines would not increase the expenses to any appreciable extent, as they had surplus power in most of the pumping plants.

During the past year Mr. Bentley, who was acquainted with other oil fields, had visited the company's properties with the sole object of seeing whether anything could be done to improve matters, and he had discussed with the committee of management the practicability of pumping the wells 12 hours instead of 24 hours. That, if successful, would very much reduce their expenses, and they found that by experimenting it was successful with those wells which were pumped naturally, but the result was not good where the wells had been gas-pumped. The experiment, however, was only tried during September and October, and it might be well to postpone further discussion of it until they had fuller data before them.

They would observe in the report of the last meeting that they intended, if circumstances permitted, to convert their £15,000 existing debentures into a larger issue, with the object of providing funds for the purpose of boring. The money market, however, had been entirely against them, and although various efforts had been made, they had not been attended with success. The board had therefore approached the debenture holders, who should have been repaid on June 30th, with a view of obtaining their indulgence for a short time, and he was pleased to say that the suggestion had been generally acquiesced in. In the meantime, their interests would be protected in every way within the power of the board. Under the circumstances he had enumerated, it had been impossible to declare any dividend upon the preference shares, or incur any voluntary capital expenditure. The board had thought it well to increase the allowance for depreciation to the extent of the balance of profit available, and to write off any abandoned wells from revenue

As regarded administrative expenses, the board had only taken half their fees, the secretarial and office allowance had been materially reduced, and both the committee of management and the manager had met the position in the same spirit. He thought therefore that they had done everything that might be reasonably expected under the circumstances. The balance sheet figures did not differ to any great extent from those of last year excepting in the matter of sundry creditors and bills payable, but he did not think they would find many, if any, oil companies with less liabilities than they had, as their total liabilities outside the £15,000 of debentures and the £2,287 of outstanding mortgages on additional property purchased some time ago, only amounted to £4,439 against which they had sundry debtors £546, and consequently their current indebtedness was under £4,000.

What the company required most was additional money with which to renew their boring operations, but they had not thought it right to do that upon credit or upon the prospect of obtaining funds after the event, and it therefore remained with the shareholders to say whether they would take an interest in the new debenture issue, and thus provide funds for the purpose of active development. There was no doubt whatever that they had a rich property upon which wells could be bored, and interesting developments were going on by others upon adjacent plots.

The speaker then moved the adoption of the report and balance sheet.

Mr. ROBERT D'OYLY NOBLE, in seconding the adoption of the report, said that the chairman had dealt so exhaustively and so fully with the affairs of the company that he had left him little to say, but having devoted thirty years of his life to the Canadian oil business, both producing and refining, he felt that he should say a few words. First of all, he desired to congratulate them upon the attendance of shareholders, which was the largest and most influential he had ever seen at any of their annual meetings. He desired also to congratulate them upon the array of petroleum talent there was in the room. They had Mr. D. A. Sutherland, who had reached the topmost pinnacle of fame in the petroleum world. He was their technical adviser, and it was to him that they were indebted for the great success which had attended their efforts since they commenced their developments in the township of Moore. When they took over the property at Moore, it was sold to the company as farming land. He was one of the vendors, and had had the land in his possession for five years, but he did not know there was oil there, but when one day Mr. Sutherland examined the property he immediately put his finger on that plot, and said it was the best property they had got. Mr. Sutherland had turned out to be a seer and a prophet, for their richest and best developments had been obtained on their Moore property. The speaker thought, in one of his reports, Mr. Sutherland called attention to their returns of investments made from that plot, which were from 650 to 700 per cent. They had also present that day another well-known expert—he alluded to Mr. Hunter—who had recently been out to Canada for the Anglo-Canadian Petroleum Co., and there he examined 1,770 acres south of their Moore plot, and he corroborated every word that had been said by Mr. Sutherland, whose prognostications had been verified to the letter, for to-day they saw operators putting down wells all over that territory, and getting wonderful returns. Then they had also present Mr. Mitchell, who represented one of the largest petroleum interests in the world to-day, and Mr. Bergheim would have been with them, for he was a shareholder, had he not at the last moment been obliged to attend another meeting. Personally, he did not think that, although the report was not very optimistic shareholders had any reason to complain, at all. The debenture holders had received 7 per cent. per annum on their debentures for five years, which amounted to 35 per cent., and that was not bad in the present times, while the preference shareholders had received four dividends of 7½ per cent., or 30 per cent. in the five years. It was true they had no dividend this year, but with remarkable sagacity those shareholders had made their preference shares cumulative, so consequently next year they would rank for their 15 per cent. It was the unfortunate ordinary shareholders that he would like to hear from, for he sympathised very much with them, for they had only had 2½ per cent. in the five years. If anyone desired to have a fling at the vendors, well, he was a director, a shareholder, and a vendor. He came to this country quite a greenhorn from the backwoods of Canada, where

he was getting a large revenue, but wanted more capital, and so he sold his property to the English company, who put up the debenture and the preference shareholders before him. The Englishmen had taken the cream out of it, and their pockets were well filled, whereas he had got just one $2\frac{1}{2}$ per cent. dividend.

The speaker then proceeded to refer, by the aid of a map, to the territory which had been acquired by the Anglo-Canadian Petroleum Co., and mentioned that they had at present two drilling rigs up, and had succeeded in getting what was looked upon as the largest gas well ever seen in that part of the world. The gas was so strong that it blew up the oil in the form of a spray, and they were now waiting until the flow subsided, when he thought that they would have unquestionably a very fine producer, and that was on territory adjacent to their own plot. Another gentleman had put down a well, and for five weeks it had been producing 50 barrels a day. He sold his oil for \$1.80 per barrel, which had cost him 30 cents to produce, so that he was making a profit of about £15 a day, and that well drilled and equipped only cost him £125.

A SHAREHOLDER enquired why their board had not had a chance of acquiring property like that?

Mr. NOBLE, in reply, said that although their manager had not received any instructions from the board, because they had no money, he promptly leased 100 acres of the land in that new territory, and in the heart of the region. To-day they had those 100 acres, but unfortunately they had got no money to develop it, and he therefore wanted to bring before the shareholders what were the plain facts. The Anglo-Canadian Petroleum Co. had let a contract to drill five wells upon their property 500 feet deep, and the contract price was £32 per well. So far as their company was concerned, it did not require much money to run additional wells, because they had pumps and casing all ready. He wanted to put down 20 new wells on that plot, and so double their production, which would cost £640. Seeing the very influential list of shareholders they had, he thought the necessary funds could be easily secured from the shareholders, so that they could double their production. He did not wish to dwell upon that matter because it seemed too ridiculous to emphasise. He had great pleasure in seconding the adoption of the report.

A SHAREHOLDER said he thought a considerable saving could be effected in the London expenses. They found that including the directors' fees, over £1,000 was spent in London for a company which had practically no business here. He did not wish to strike any discordant note nor did he wish to suggest lack of confidence in the directors, but he did think that in the present bad times the directors might forego their fees until the prosperity of the company was secured, when they could be made up in the shape of bonuses.

Mr. MITCHELL said he had a chat with Mr. Bergheim, who had had much experience in oil matters, and he was of opinion that, without spending any money, the directors had the remedy in their own hands. They had about five hundred wells, and their production of oil worked out at about 43 barrels per day, or an average of six gallons per well per day. They had had it stated that some of the wells were producing 60 gallons per day, and so the amount of oil which was being got from many of the wells must be infinitesimal. In fact, it was absolutely certain that on a very large proportion of the wells they were losing money. If they cut down the number of wells, say, 75 per cent., which was what Mr. Bergheim suggested, they might then cut down their expenses in Canada from £7,000 to £2,000; and after all it was a net, and not a gross, profit they wanted. Had boring work been continued at the cost of revenue from year to year so as to keep up the production, the company's position would have been very different from what it was to-day.

A SHAREHOLDER suggested that fresh interest should be added to the board. No doubt the directors had done their best, but if fresh energy were brought into the company they might advance again, for everyone admitted they had a good property and a valuable one.

ANOTHER SHAREHOLDER said that, seeing that during the past four years the board had spent £20,000 in a policy of development, and that the results had been a decreasing production, what guarantee had the shareholders that further expenditure would benefit the company? He failed to see why there should be such a shrinkage in the output if the property was as valuable as Mr. Noble made out. With a list of shareholders such as they had, surely it was worth while making a definite attempt to co-operate with the board in order to raise a sum of money which would settle that question once and for all.

Mr. BENTLEY said he had during the past year, though not at the expense of the company, visited their property in order that he

might bring such knowledge as he possessed to bear on the company's affairs, having been both in Russia and Roumania, and knowing a little about oil companies. The first thing he did was to visit the various properties, and he was very much impressed with the silent manner in which the revenue, such as it was, was being produced by methods quite different from those in use in the oil fields to which he had alluded. He admitted that if they were to pump some of their wells individually, they would be unremunerative, but seeing that they were being worked from central pumping rigs, they were unquestionably remunerative. The small producing wells, by being thrown on to the existing plant, did not materially increase the cost of running. He desired to make that point clear, inasmuch as Mr. Mitchell had raised the question of knocking off a number of the wells. Mr. Mitchell had said that many of the wells could not pay. He, the speaker, had the statement before him for September which shewed that 490 wells were being pumped, but he thought only 60 wells should be shut off as non-payers. As they knew, the price of a barrel of oil averaged \$1.88. The cost of pumping—and he was dealing only with the old wells—was on the various plots \$1.9; 73 cents; \$1.37 (which he admitted came very near the border line); \$1.31 per barrel; \$1.30; \$1.33 and \$1.60. That latter figure was abnormal, but it was caused by the pumping plant breaking down. On another plot the pumping expenses worked out at 93 cents. Now he came to the Moore territory, and pumping expenses there were 55 cents per barrel, and the selling price \$1.88. He suggested to the committee of management on the spot that they should consider whether it would not be wise to pump the older wells for 12 hours, instead of 24, and thus reduce the expenses. In September and October a number of the wells were pumped in that way, and they had recently received a telegram to the effect that only a few of the wells would in future have to be pumped 24 hours—a fact which he thought was some confirmation of the suggestions which he put forward. If they would look at the balance sheet they would see where their money had gone. They had already got good property, and he would say to the shareholders that their best course was to put wells upon that plot at Moore, which had been secured through the foresight of their local management. It was no good spending money first and then getting it afterwards; they had to look at the matter from a commercial point of view. If people put up the money with which to develop their property, they would ask, was that going to benefit them, or was it going to benefit the whole company, and, if both, in what manner? His colleagues on the board were quite willing to meet, and would heartily welcome, any shareholders of the company who would like to confer with them, and offer them suggestions as to the best means of the further investment of capital on plots which they already possessed, bearing in mind as far as they could the interests of the company itself, and he thought that if they had such a consultation, nothing but good would result.

Mr. SUTHERLAND, in the course of an interesting speech, pointed out that until this year he had visited the company's property every year, and there seen how work was progressing, but owing to his work in Australia he had been unable to visit Canada during the past year. From his previous visits, however, he could support all that Mr. Bentley had said regarding the pumping of the small wells. A great deal had been said as to the falling off of the production, but in looking over the figures for the five years he found that that falling off only represented about 5 per cent. per annum, which was quite small. He had all along advocated a continuance of drilling work, for it was that alone which would keep up the production. There was not the slightest doubt that large returns could be made from wells on the Moore property: some of the wells there had been yielding 40 barrels per month—approximately 500 per annum—and they had been doing that for the past two or three years. Therefore, if £5,000 were put into the Moore territory he was quite certain that the returns would be most satisfactory. If they would only go in for drilling wells, he thought the future was safe, but if they did not adopt a progressive drilling programme, then they could not expect other than a decreasing production.

The report and balance sheet were then agreed to unanimously.

Mr. BENTLEY then moved the re-election of Sir Henry Green as director and also Mr. Gladstone, and

Mr. Moss seconded the resolution, which was likewise carried with acclamation.

Mr. BENTLEY then appealed to the meeting to appoint a few shareholders, who would confer with the board upon the financial position and other matters, and after discussion it was agreed that this committee should consist of Messrs. Moss, Allen and Bergheim, with power to add to their number.

The auditors having been re-elected, a hearty vote of thanks to the Chairman for presiding closed the meeting.

NOTES FROM ALL QUARTERS.

RUSSIA.

The Caucasian Mining Authorities have granted to Mr. Saftar Bek Ashurbekoff, permission to exploit for petroleum on plots Nos. 138 and 139 at Saboontchi of about half-acre each.

A Link with the Past.—The Osobuiak refinery, belonging to the executors of Mr. Rilsky at Baku, is now being entirely pulled down. This was one of the oldest refinery at Baku. Its owners formerly were the late Messrs. Dolinin and Abramovitch, two engineers well known at Baku.

Mr. Ivan Nabatoff has been granted the lease without auction of plot No. 11 at Balakhany of an area of about 10 acres for a period of 12 years for the exploitation of petroleum. The royalty to be 20 per cent of the production, with a minimum obligatory output of 130,000 poods per annum.

New Developments at Tcheleken.—A group of American capitalists interested in the Texas oil fields have become interested in Tcheleken Island in the Caspian Sea, and have commissioned Mr. Globor, an engineer resident in Russia, to inspect the oil fields there on their behalf. Mr. Globor has already completed his inspection, and forwarded his report to America.

Reclaiming Bebe-Aibat Bay.—The Technical Committee of the Commercial Ports Department of the Ministry of Commerce has had under consideration the report of the committee on the reclamation of a portion of Bebe-Aibat Bay. The work is estimated to cost 7,500,000 roubles, and to take five years to complete. The report points out the inconvenience of transporting Bebe-Aibat crude to Black City by water, and recommends the laying of pipe lines.

Extension of Time for Exploiting Possessions.—The Caucasian Mines Administration have extended the period for starting exploitation on the following petroleum concessions at Berekei:—(1) Benkendorf and Co., plot No. 47, till 5th June, 1909; (2) executors of M. Berne, plot 119, till 15th December, 1909; (3) Ali Bek Ashurbekoff, plot No. 95, 24th October, 1909; (4) Benkendorf and Co., plot No. 58, 15th April, 1910; (5) Mr. L. Dickman, plot No. 67, 11th November, 1909; (6) Ali Khan Heidari, plot No. 39, 19th September, 1909.

AMERICA.

To the Gulf.—We learn that all stations on the Gulf Pipe Line Co.'s line are now working at their full capacity, and that the pipe line deliveries are averaging 13,000 barrels per day. Some of the oil is for the present being stored at Sour Lake.

Prospecting near Spindle Top.—A new company has recently been formed to prospect for oil at a spot about six miles south of the famous Spindle Top. About 1,500 acres of land have been secured for this purpose, and it is said that the indications are very encouraging.

The Largest Refinery in the World.—The Standard Oil Co. is now engaged upon building what is described as the largest oil refinery in the world at Benbow City, Ill. When completed, no less than 200 large storage tanks will take care of the supply of crude for the refinery needs.

A Novel Exhibit.—An interesting feature of the great Texas State fair at Dallas, held recently, was the exhibit of the Texas Co., which shewed every detail of the oil business from drilling rig to refined product. This exhibit is said to have been the most complete of its kind ever presented.

The Atlantic Refining Company.—The president of the Atlantic Refining Co. announces that work is to be commenced upon the extension of the Eclipse refinery in Venango county, Pa., which will permit of its capacity being doubled. The present capacity of the refinery is about 8,000 barrels.

Gulf Coast Production.—The production of oil in the Gulf Coast fields during October is estimated at 45,900 barrels per day, this figure being a decline of about 3,000 barrels from the September figures. The decrease is due to the falling off of production in the Jennings field, for, without reckoning the Louisiana districts, the Texas production shews slight advance.

ROUMANIA.

Messrs. Pleyte and Company.—The prospecting well which Messrs. C. M. Pleyte and Co. are drilling at Bucsani, in the Dambovitza district, has reached a depth of 300 metres.

Another Spouter.—The Romano-American Co. are displaying great drilling activity in Moreni, while among the many prolific wells there is one which spouts intermittently every 15 minutes.

To Exploit at Moreni.—The Regatul Roman Co. has informed the Ministry of Domains that it is going to drill 10 wells on the concession which it has obtained on State lands at Moreni, and which had not been explored before.

Something New in Roumania.—The Steaua Romana has commenced drilling a second well at Aricesti, of a diameter hitherto unknown in Roumania, *i.e.*, 7 metres, so as to be able to shut off the numerous sand strata, without unduly affecting the final diameter of the borehole.

Roumanian Prices.—The price of crude oil in Roumania remains stationary at 3.75-3.85 per 100 kilogrammes at the wells at Bustenari. Baicoi and Campina oils are naturally in greater demand, as containing more benzine. Dealings, however, are restricted, both buyers and sellers having adopted a waiting attitude. In the home market, for illuminating oil severe competition continues between the Cartel and the Romano-American Co. The export price for illuminating oil remains unchanged.

Steaua Romana Developments at Baicoi.—There is little activity now displayed at Baicoi, except by the Steaua Romana, who has started four new wells, and has explored by means of hand wells the prolongation of the Baicoi-Filipeshti-Moreni zone in order to establish the programme of developments for 1908. The company is now also repairing its rich well No. 6, on which it is still placing great hopes. It is an interesting fact that well No. 8, after going through 450 metres without encountering the prolific stratum found in 1906, reverted to the feeble stratum met with at 100 metres, and from which some 400 tons of an oil of 0.820 gravity and rich in benzine is produced monthly.

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PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING OCTOBER.

THE SHIPMENTS INTO VARIOUS PORTS.

The imports of petroleum and the various allied products into the different ports of the United Kingdom during October are published in the following table. In all, the month's imports amounted to 28,774,650 gallons, as against 24,521,330 gallons for September, and

23,486,660 gallons in August. The imports of illuminating oil are naturally increasing now month by month; but, comparing October with September, there are also increases in lubricating and fuel oils as well as benzine. The table is as under:—

	Lubricating.	Illuminating.	Residuals.	Benzine.	Other Products	Fuel.	Gas.
Aberdeen ...	200	1,000	—	—	—	—	—
Barrow ...	—	—	—	397,220	—	—	—
Belfast ...	1,360	—	—	—	—	—	771,000
Bristol ...	471,830	2,585,710	4,000	—	1,000	—	291,440
Cork ...	120	—	—	—	—	—	—
Dublin ...	—	—	—	—	—	—	731,550
Dundee ...	400	—	—	—	400	—	—
Glasgow ...	278,950	9,600	—	—	19,720	—	—
Gloucester ...	120	—	—	—	—	—	—
Goole ...	600	—	—	—	—	—	—
Grangemouth ...	17,880	14,240	—	—	—	—	—
Grimsby ...	5,190	—	—	—	—	—	—
Hull ...	396,680	—	—	26,000	16,060	—	—
Leith ...	54,760	12,900	—	—	—	—	—
Liverpool ...	892,590	788,130	—	—	7,080	—	539,400
London ...	1,957,970	8,225,240	—	1,551,710	—	1,020,000	4,044,260
Manchester ...	1,275,520	501,600	—	—	10,870	—	330,000
Middlesboro' ...	3,240	—	—	14,000	—	—	—
Newcastle ...	15,220	—	—	—	—	—	—
Newport ...	—	—	—	—	22,130	—	—
Plymouth ...	280	—	—	—	—	—	—
Sunderland ...	—	881,880	—	—	583,860	—	—
Swansea ...	740	—	—	—	—	—	—
Totals ...	5,373,550	13,019,400	4,000	1,988,930	661,120	1,020,000	6,707,650

DETAILS OF BAKU PRODUCTION AND BORING DURING AUGUST, 1907.

The following are the details of the production of crude oil at the Baku oil fields during August, as published in the latest issue of the *Neftiannoie Dielo*:—

						PRODUCTION (in poods).				Average per Well per Day.
						By Baling.	By Spouters.	Casual.	Total.	
Balakhany	..	..	..	..	716	6,237,089	—	11,099	6,248,188	293
Saboontchi	..	..	..	..	628	14,384,477	219,477	342,687	14,946,641	828
Ramany	..	..	..	..	195	7,167,754	—	6,400	7,174,154	1,283
Bebe-Aibat	..	..	..	..	214	11,147,620	710,177	14,300	11,872,097	1,891
Total in August, 1907..	..	..	..	..	1,753	38,936,940	929,654	374,486	40,241,080	896
Total in June, 1907 ..	..	..	..	..	1,765	41,313,371	343,227	355,695	42,012,293	801
Total in August, 1906 ..	..	..	..	..	1,281	26,245,695	—	150,803	26,396,494	530

The production by spouters in August was obtained from the following wells:—

				Name of Firm.	No. of Plot.	No. of Well.	Production. Poods.
At Saboontchi	..	..	..	Moscow-Caucasian Co.	59/c	22	188,000
"	..	..	..	Nobel Bros.	60	410	24,477
"	..	..	..	"	51/c	432	7,000
" Bebe-Aibat	..	..	..	"	27	25	697,377
"	..	..	..	Russian Bebe-Aibat Co.	11	10	12,800

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO NOVEMBER 18th, 1907.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Nov. 4.	From Jan. 1.	Since Nov. 4.	From Jan. 1.	Since Nov. 4.	From Jan. 1.	Since Nov. 4.	From Jan. 1.	Since Nov. 4.	From Jan. 1.	Since Nov. 4.	From Jan. 1.	Since Nov. 4.	From Jan. 1.	Since Nov. 4.	From Jan. 1.
Austria	—	—	—	79,580	—	67,770	—	—	—	—	—	—	—	—	—	147,350
Belgium	—	153,410	46,600	649,905	—	—	—	310	—	4,000	—	—	—	860	46,600	803,485
Canada	—	—	—	—	—	8,800	—	—	—	—	—	—	—	—	—	8,800
Dutch India.	—	—	—	—	—	—	—	—	—	21,139,320	—	—	—	—	—	21,139,320
Germany	49,470	2,781,305	56,430	1,291,830	—	2,000	70	70	—	80	—	—	240	5,140	106,210	4,080,485
Holland	—	1,070	7,350	23,250	—	—	—	—	49,500	586,920	—	—	8,040	122,270	64,890	733,510
Roumania	4,19,000	7,138,290	—	—	—	—	—	7,295,090	—	1,459,000	—	238,700	—	—	429,000	16,131,030
Russia	1,620,000	28,509,200	9,150	3,809,350	—	125,960	—	887,040	—	12,690	—	—	—	1,423,780	1,629,150	34,768,020
U.S.A.	4,919,930	90,066,240	1,288,590	35,809,075	—	854,660	2,022,890	46,293,320	581,700	5,478,610	—	5,677,570	23,720	1,815,480	8,836,830	185,994,955
Other Countries	—	950	620	79,545	—	4,760	—	—	—	2,500	—	40	400	140,320	1,020	228,115
	7,018,400	128,650,465	1,408,740	41,742,595	—	1,063,950	2,022,960	54,475,830	631,200	28,683,120	—	5,916,310	32,400	3,507,850	11,113,700	264,040,120

American Production of Petroleum in 1906.

GOVERNMENT REPORT.

Messrs. David T. Day and W. T. Griswold have again been responsible for the annual report of the U.S. Geological Survey upon the petroleum production in 1906 throughout America, which is shortly to be issued.

To some, it may appear that the report is somewhat belated, as the details of petroleum production have been publicly announced months ago; in fact, with the now almost perfect system of collecting data, it is possible to give complete figures within a few weeks after the close of the year. But these annual geological survey reports are something more than dull records of production: they are exceedingly valuable as shewing the changes in the various spheres of activity and production, and consequently their publication is always looked forward to with a considerable amount of interest.

The official figures give the production of petroleum in America for 1906 as 126,400,000 barrels, this quantity being valued at \$92,444,000 or 73.1 cents per barrel, as against 134,700,000 barrels in 1905, valued at \$84,100,000 or 62.5 cents per barrel.

The authors point out that the most important features in connection with the petroleum industry in 1906 were:—

(1) The extension in area and the increased daily production of oil in the Mid-Continent field.

(2) The expansion of the area in Illinois from which oil is being produced. This field has expanded from its point of original discovery near Casey to the south-east, into Lawrence county.

(3) The growth of the consumption of fuel oil in California. The consumption of fuel oil in 1906 in this State exceeded the total production of the California field during the year.

(4) The falling off in the production from the pools of the Coastal Plain district of the Gulf States.

(5) The continued decrease in the average daily production from the Appalachian field.

(6) The laying of the second pipe line from the Mid-Continent field to Whiting, Ind., and the building of a pipe line across the Isthmus of Panama for the delivery of the oil from the California field to the Atlantic Ocean.

The production of petroleum in the United States during the year 1906 was 126,493,936 barrels. This quantity was produced from the five great fields as follows:—Appalachian field, 27,741,472 barrels; Lima-Indiana-Illinois field, 21,951,711 barrels; Mid-Continent field, 21,718,648 barrels; Gulf field, 21,645,425 barrels; California field, 33,098,598 barrels; and besides these quantities, 338,082 barrels were produced from scattering States, principally Colorado and Wyoming.

This production is made up of what for lack of better terms may be called the two great classes of petroleum—illuminating-crude and fuel crude. These distinctive names are not absolutely correct, as all petroleum furnishes some illuminating oil and any petroleum may be used for fuel. The greater part of the oil from the

Gulf and the California fields, however, is consumed as fuel, while but a small proportion of that produced in the other fields is so consumed.

In the year 1900 the Appalachian field produced 36,295,433 barrels of petroleum, the greatest quantity ever taken in one year from that field. Since that date there has been a steady falling off in the yearly production of the Appalachian field as follows, expressed in percentage of the year 1900:—7.4 per cent. in 1901, 11.8 per cent. in 1902, 13 per cent. in 1903, 13.5 per cent. in 1904, 19.1 per cent. in 1905, and 23.6 per cent. in 1906. It is probable that the production from the Appalachian field will continue to decrease each year, as there are very few untested areas within the limits of the field that could contain a large pool of oil.

The quantity of oil produced from the Lima-Indiana-Illinois field was 523,544 barrels less than the production of the year 1905. That the falling off in output from this field is so slight is due to the large new producing area in Illinois that has been added to the field. This portion of the field increased in production from 181,084 barrels in 1905 to 4,397,050 barrels in 1906. The older portion of the field included in Western Ohio and Indiana shews a falling off in the quantity produced since the year 1904, when 24,689,184 barrels of oil were taken from the ground. In the year 1905 this quantity decreased by 9.7 per cent., and in 1906 by 21.3 per cent.

The Mid-Continent oil field produced more oil in 1906 than in any previous year. The production of this field has rapidly increased since 1902. During this period the oil development has been carried south until at the end of 1906 it extended from Humboldt, Kan., to fifteen miles south of Tulsa, I.T.

The oil production of Colorado and most of that of Wyoming should be added to the illuminating crude oil supply. The total quantity of crude oil for illuminating purposes produced in the year 1906 was 71,749,913 barrels.

In the following tables are presented the figures shewing the production of crude petroleum in the United States by States in 1905 and 1906; also the value of the output and the average price per barrel:—

State.			1905.		Average Price per Barrel.
			Quantity (Barrels).	Value.	
California	..	..	33,427,473	\$8,201,846	\$0.245
Colorado	..	..	376,238	337,606	.897
Illinois	..	..	181,084	116,561	.644
Indiana	..	..	10,964,247	9,404,909	.858
Indian Territory, Oklahoma,					
Kansas	..	..	12,013,495	6,546,398	.555
Kentucky, Tennessee	..	..	1,217,337	943,211	.775
Louisiana	..	..	8,910,416	1,601,325	.180
Michigan, Missouri	..	..	3,100	3,320	1.071
New York	..	..	1,117,582	1,557,630	1.394
Ohio	..	..	16,346,660	17,054,877	1.043
Pennsylvania	..	..	10,437,195	14,653,278	1.404
Texas	..	..	28,136,189	7,552,262	.268
West Virginia	..	..	11,578,110	16,132,031	1.393
Wyoming	..	..	8,454	51,545	6.10
Totals	..	..	134,717,580	\$84,157,393	\$0.625

State.	1906.	Average
	Quantity (Barrels).	Price per Barrel.
California	33,098,598	\$9,553,430
Colorado	327,582	262,675
Illinois	4,397,050	3,277,818
Indiana	7,673,477	6,770,066
Indian Territory, Oklahoma,		
Kansas	21,718,648	9,615,198
Kentucky, Tennessee ..	1,213,548	1,031,629
Louisiana	9,077,528	3,557,838
Michigan, Missouri ..	3,500	4,890
New York	1,243,517	1,995,377
Ohio	14,787,763	16,997,000
Pennsylvania	10,256,893	16,596,943
Texas	12,567,897	6,565,578
West Virginia	10,120,935	16,170,293
Wyoming	7,000	49,000
Totals	126,493,936	\$92,444,735

In the output of 1906 California ranks first, having produced nearly one-fourth the total production of the United States. It is not practicable to separate the output from the Indian Territory, Oklahoma and Kansas, but the joint production of these three States takes second place in the table. If the production of these States was separated it is probable that the Indian Territory would fall into seventh place, while the other two States would be much further down the list. In the rank of the States as to the value of the oil produced Ohio stands first, with Pennsylvania and West Virginia second and third.

The area of the United States from which petroleum and natural gas have been produced in commercial quantity may be divided into five great fields and a few scattering States. The division into fields is governed by the quality of oil produced and the geographic location. Four of the great fields include more than one State, and one State enters into two fields. This is Ohio, which in its eastern and southern part belongs to the Appalachian field and in its north-western part to the Lima-Indiana-Illinois field. The division of the oil territory into fields allows the production of one year to be compared with those of previous years for oils that find different uses in the commercial world, and by considering each of the great fields as a unit the rate of increase or decrease in the production of oil of particular quality can be followed from year to year.

The Appalachian field produces oil of paraffin base of the very best quality. The field extends along the western side of the Appalachian Mountains from New York, through Pennsylvania, South-east Ohio, West Virginia and Kentucky into Tennessee.

The Lima-Indiana-Illinois field furnishes oil having a paraffin base, but containing a percentage of sulphur. The field includes the north-western part of Ohio, a strip through the middle of Indiana and the south-eastern portion of Illinois. There is some doubt as to whether the oil-producing area of Illinois should rightly be added to the Lima-Indiana field, as the oil is not produced from the same geologic horizon.

The Mid-Continent field produces oil with a mixed asphalt and paraffin base. The quality of oil produced from different sections differs materially. The area included within the field is the western portion of Missouri, the State of Kansas, Indian Territory and Oklahoma.

The greater portion of the oil from the Gulf field has an asphalt base, with qualities favourable for use in the manufacture of lubricants and as a fuel. This oil comes from the coastal plains of Texas and Louisiana.

California produces large quantities of oil of asphalt base. The present area of production is in Southern California and at the south end of the San Joaquin Valley.

Small quantities of oil have been produced for a number of years from Wyoming, Colorado and Michigan. There are indications of oil, but no actual production from a number of other States. Wyoming shews the greatest probability of developing an oil field of large importance.

In the following table is given the production of petroleum in the United States by fields in 1905 and 1906:—

Field.	1905. Barrels.	1906. Barrels.
Appalachian	29,366,960	27,741,472
Lima-Indiana-Illinois ..	22,475,255	21,951,711
Mid-Continent	12,013,495	21,718,648
Gulf	37,046,605	21,645,425
California	33,427,473	33,098,598
Other Fields	387,792	338,082
Totals	134,717,580	126,493,936

The great Appalachian oil field, which extends from Wellsville, N. Y., along the western slope of the Allegheny Mountains to the north boundary of Tennessee, produces its oil and gas from porous sandstones and conglomerates which are embedded in and underlain by great masses of shale. These sandstone beds are each of large extent, underlying many counties and in some cases extending into a number of States. They occupy a position in the geological column of over 2,000 feet, extending from the Allegheny formation of the Pennsylvanian (Carboniferous period) to the base of the Devonian period.

In general the field occupies the bottom and western side of a large spoon-shaped trough. In detail the slope of the beds is not regular, but is affected by two sets of foldings. The main fold has a north-east and south-west strike, generally parallel to the ridges of the Appalachian Mountains. This is crossed by a secondary fold of less pronounced character at nearly right angles to the first. This combination forms a system of structures, which consist of canoe-shaped basins and elongated domes. The structural condition of the rock is the important factor in the accumulation of the oil and gas, the exact location of which is governed by the quantity of saline water contained within a particular sandstone. The younger or higher sands in the geological column are found to be completely saturated by salt water over a greater extent than the older or lower sandstones. This causes the oil accumulations to be higher up on the anticlines in the younger rocks, and mostly within the synclines in the older or lower sandstone beds.

Almost the entire product of the Appalachian field is sold under the head of Pennsylvania oil. There are certain districts, such as Tiona and Middle districts, where the quality demands a premium of 10 to 15 cents above the regular Pennsylvania grade. Certain limited areas of Ohio and West Virginia produce oils not fully up to the regular Pennsylvania standard. None of the oil of Kentucky and Tennessee brings as high a price as Pennsylvania oil, and some of the oil only about 30 per cent. of the price.

In the last few years the production of the Appalachian field has dropped from over a half of the total production of the United States to less than one-fourth. This has come to pass not so much by the falling off in the production of the field, as by the great increase in the quantity of oil produced in other portions of the United States. The Appalachian field produced 8,553,961 barrels of oil less in 1906 than in 1900, the year of greatest production.

The American Oil Market.

New York, Week ended Nov. 9th.

Operations in the lower south-west fields have been interrupted by the holiday, and reports from the more important districts have indicated little out of the ordinary. Further deep sand tests in Wetzel and Monongalia counties, West Virginia, have been attended with no encouraging results, nothing better than light producers being developed when dusters were not encountered. The favourable showing recently reported in Harrison county in the same State has had somewhat of a setback with the rapid decline of the gusher that stimulated the keen prospects for new territory. Roane county furnished an exception to the general rule in a well on Green Creek, Walton district, that was credited with an initial flow of 60 barrels the first twenty-four hours after it had been shot. Continued efforts to find a lead from the big producer in Aleppo township, Green county, Pa., have been disappointing, although the well is maintaining a record of 135 barrels a day, after a four months' steady output. The neighbouring territory has been well tested, but nothing suggesting an extension to the pool has been experienced, exemplifying the freakish character of this section. The most favourable result reported in the south-eastern Ohio district is a 20-barrel producer at 800 feet in the Macksburg field, of Washington county. The report of developments in the fields of the Pennsylvania classification for October is significant of declining production, although completions for the month were the same as those for August, 703, surpassing any previous month of the year. The number of dry holes encountered last month was lighter than for any month since April, but the yield from the new October wells amounted to 2,553 barrels, against 3,803 and 3,538 barrels for August and September, respectively. Thus the average for each producing well for October is reduced to four and three-quarters barrels, establishing a low record for the ten months of the year. Despite this unfavourable comparison there was no check to operations, 256 rigs up and 512 wells drilling at the close of the month, the total being the highest for four months.

The most impressive showing in the October report on the Lima field, says the *Oil, Paint and Drug Reporter*, is the gain in new production in north-western Ohio, which amounted to 1,012 barrels, although the completions were less than in September. The average per new producing well was 17½ barrels, the highest so far this year. There were fewer abandoned wells in the Ohio end, but the number on the Indiana side was larger during October than any previous month of the year. Advices from the Gulf coast note an excess of production over movement and consumption during October by nearly 115,000 barrels, an increase in rail and port shipments having been more than overcome by the decrease in refinery consumption, the refineries having drawn considerably upon crude from Glenn pool. The actual number of completions in Texas and Louisiana during October was 71 wells, 56 being producers of an initial output of 6,869 barrels, or 123 barrels per well. A further decline of 3 cents is recorded in Gulf coast values and the tendency is believed to be still downward.

REFINED AND PRODUCTS.—Conditions governing the local market for refined have presented little of particular interest during the week, but trading has been of well-sustained proportions, with a substantial increase noted in the export movement. Clearances for the week aggregated 12,695,160 gallons, of which 7,600,000 gallons were shipped in bulk. The record for the previous week was 10,167,550 gallons, 5,852,500 of which were in bulk. Additional charters have comprised 150,000 cases for December shipment to Japan, Philadelphia loading, and 90,000 cases for four ports in Japan, November-December, and 80,000 cases for three ports on the River Plate, November, New York loading. There have been no developments affecting value, the general sentiment being one of continual firmness. Our correspondent writes of a further weakening of crude, and the products

on the Baku market in consequence of the diminished demand, especially for kerosene, for which even lower prices are awaited with the close of navigation of the Volga, when the competition of American and Roumanian oils in the export markets will be all the keener.

There has been an uneventful market for the products during the interval, the demand continuing along even lines and prices unchanged for all varieties. The export movement in naphtha was light, clearances for the week aggregating 92,400 gallons, against 243,590 gallons during the previous week.

CLOSING QUOTATIONS

CRUDE.	Week ended	
	Nov. 2.	Nov. 9.
Pennsylvania crude in bbls.	1907.	1907.
	\$8.20	\$8.20
Pennsylvania crude in bulk	4.75	4.75
Residuum, bbls. for export	6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Nov. 2.	Nov. 9.
		1906.	1907.
Pennsylvania	1.64	1.78	
Tiona	1.74	1.78	
North Lima	0.98	0.94	
South Lima	0.93	0.89	
Indiana	0.93	0.89	
CANADIAN OIL:			
Petrolia	1.37	1.34	

REFINED—FOR EXPORT.

		Week ended	
		Nov. 9.	
		S.W.	W.W.
Barrels, cargo per gal.	\$8.75	@10.75	
Philadelphia	8.70	@10.70	
Bulk, New York	5.00	@7.00	
Bulk, Philadelphia	4.95	@6.95	
Cases, New York	10.90	@13.90	
Cases, Philadelphia	10.85	@13.85	

REFINED IN CASES—IIO FIRE TEST.

		Week ended	
		Nov. 2.	Nov. 9.
		1907.	1907.
3,000 to 10,000	11.05	11.05	
1,000 to 3,000	11.10	11.10	

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Nov. 2.	Nov. 9.
120 fire test, S.W. .. in barrels	12	12	
130 fire test, S.W.	12½	12½	
150 fire test, W.W.	13½	13½	
In bulk from tanks	10	10	
300 fire test	13½@14	13½@14	

NAPHTHA AND GASOLINE.

		Week ended	
		Nov. 2.	Nov. 9.
Naphtha, crude, car. lots, 68 @ 72 deg.	15.00	15.00	
Gasolene, 86 deg.	24.00	24.00	

PENNSYLVANIAN OIL RUNS from Oct. 30th to Nov. 4th were:—Oct. 30th, 226,534; Oct. 31st, 261,781; Nov. 1st and 2nd, 217,505; Nov. 3rd and 4th, 345,875. For the month of September, 2,613,959.

THE DELIVERIES OF PENNSYLVANIA OIL from Oct. 30th to Nov. 4th were:—Oct. 30th, 189,745; Oct. 31st, 184,542; Nov. 1st, 178,259; Nov. 2nd and 3rd, 357,084; Nov. 4th and 5th, 367,655. For the month of September, 5,654,718.

CLEARANCES FOR THE WEEK.

During the week ended Nov. 8th, and since Jan. 1 the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1906.
Refined	12,695,160	415,132,065	395,431,214
Crude	—	1,473,725	232,900
Naphtha	92,400	7,855,960	14,408,734
Residuum	—	689,237	4,249,600

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Nov. 8th ..	16,926,880
Total from New York, from Jan. 1st, 1907 ..	605,072,141
Same period last year	528,201,854
Increase	76,870,287
From United States, week ended Nov. 8th ..	23,431,953
Total from United States, since Jan. 1st, 1907 ..	1,094,368,023
Same period last year	1,037,491,408
Increase	56,876,615

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The "Review" Shipping List.

NOVEMBER 22, 1907.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Selzaete	Lisbon	Arr. Nov. 11	EUPLECTELA	Singapore ..	Tientsin	L. Nov. 15
ALICE ISABELLE..	Sables	Philadelphia	L. Nov. 2	EXCELSIOR	Rotterdam ..	New York ..	P. Prawle,
ALEMBIC	d'Olonne	—	—	—	—	—	Nov. 12
AMERICAN	Sydney (C.B.)	—	P. Sydney Light, Oct. 31	EZIO	—	Philadelphia	Coasting Peru
APPALACHEE	Antwerp	Batoum	L. Nov. 20	FRANCE MARIE ..	Marseilles ..	—	P. Tarifa,
APSCHERON	Kustendje ..	Calcutta	Arr. Nov. 20	GEESTEMUNDE ..	Philadelphia	Oxelosund ..	Oct. 22
ARAL	Batoum	Genoa	L. Nov. 18	GENESSE	London	Tyne	P. Del. Break.,
ARAS	Tyne	Philadelphia	At Del. Break, Nov. 19	GEORGIAN	Philadelphia	Rouen	Nov. 7
ARGYLL	Penarth	New York ..	L. Nov. 9	PRINCE	—	—	L. Nov. 21
ASHTABULA	—	—	L. Nov. 9	GOLDMOUTH	Cardiff	Singapore ..	P. Del. Break,
ASTRAKHAN	—	—	Coasting U.S. (Pacific)	GUTHEIL	Hamburg ..	New York ..	Nov. 8
ATLAS	San Francisco	Shanghai ..	L. Oct. 27	HAINAUT	Antwerp	Alexandria..	L. Suez,
AUGUSTA	Philadelphia	Dover	P. Lizard, Nov. 21	HARRY	London	New Orleans	Nov. 5
AUGUST KORFF..	—	—	Coasting U.S. (Pacific)	WADSWORTH ..	—	—	P. Dunnet Head,
AUREOLE	Philadelphia	Liverpool ..	P. Fastnet, Nov. 20	HELIOS	New York ..	Nordenhamn	Nov. 13
BAKU STANDARD	New York ..	Avonmouth	L. Nov. 15	HOTHAM	Calais	Swansea	L. Nov. 15
BALAKANI	Belfast	Philadelphia	P. Torr Head, Nov. 10	NEWTON	—	—	Arr. Nov. 10
BAZOV	—	—	Trading on W.C. of South Amca.	HOUSATONIC	Bengkalis ..	—	L. Nov. 11
BAKU STANDARD	Alexandria..	Rouen	P. Peniche, Nov. 18	IMPERIAL	—	—	L. Nov. 20
BALAKANI	Port Arthur (Texas)	Rotterdam ..	L. Nov. 16	IOANNIS COUTZIS	Rouen	Cardiff	P. Perim,
BATOUM	Karatzu	Singapore ..	L. Oct. 25	J.B.AUG.KESSLER	Rotterdam ..	New York ..	Nov. 20
BAYONNE	Leghorn	Philadelphia	L. Algiers, Nov. 3	JAMES BRAND	London	Philadelphia	Tr. on Lakes btn.
BEACON LIGHT ..	Philadelphia	Dover	L. Nov. 19	JULES HENRI	Philadelphia	Marseilles ..	U.S.A. and Can.
BEME	Bombay	Rangoon....	L. Oct. 22	KURA	Tyne	Philadelphia	Arr. Nov. 16
BLOOMFIELD	Barry	Constant'ple	P. Sagres, Nov. 19	LA CAMPINE	Antwerp	Philadelphia	Arr. Nov. 12
BORJOM	Batoum	Alexandria..	Arr. Nov. 11	LA FLANDRE	New York ..	Antwerp	Arr. Nov. 8
BRILLIANT	Hamburg ..	Philadelphia	At Del. Break., Nov. 20	LA HESBAYE	Antwerp	Batoum ..	P. Gibraltar,
BROADMAYNE	Havre	New York ..	P. Lizard, Nov. 12	LA MADELEINE ..	Algiers	Brest	Nov. 9
BULLMOUTH	Hankow	Palembang..	Arr. Nov. 7	LA VIGUESA	Philadelphia	Corunna	Arr. June 16
BULYSES	Singapore ..	New York ..	Arr. Oct. 25	LACKAWANNA....	Liverpool ..	Philadelphia	Arr. Oct. 30
BURGERMEISTER	Stockholm ..	Hamburg ..	P. Brunsbuttel, Nov. 9	LANSING	San Francisco	Port Louis ..	Arr. Nov. 16
PETERSEN	—	—	—	LE COQ	Havre	Port Louis ..	L. Nov. 1
CALCUTTA	San Francisco	Shanghai ..	L. Oct. 28	LOUTSCH	Batoum	Santander ..	Arr. Nov. 20
CAPTAIN A. F. LUCAS	London	Port Arthur	P. Scilly, Nov. 3	LUCERNA	Port Talbot	Odessa	L. Aug. 14
CARDIUM	Samboe	Channel	Off Pantellaria, Nov. 19	LUCILINE	Philadelphia	New York ..	L. Nov. 19
CATANIA	Seattle	San Francisco	L. Nov. 5	LUMEN	Kustendje ..	Rouen	Arr. Nov. 19
CAUCASIAN	London	Port Arthur	P. Lizard, Nov. 4	LUX	Philadelphia	Rouen	P. Havre,
CHARLOIS	Philadelphia	Rotterdam ..	P. Del. Break., Nov. 8	MANHATTAN	Batoum	Alicante	Nov. 18
CHESAPEAKE	Calcutta	Aroe Bay ..	L. Oct. 23	MANNHEIM	Hamburg ..	New York ..	P. Del. Break,
CHESTER	Antwerp	Philadelphia	P. Lizard, Nov. 11	MARGARETHA ..	—	New York ..	Nov. 20
CIRCASIAN	Callao	Caleta Buena	Arr. Oct. 1	METEOR	Philadelphia	Genoa	Arr. Nov. 3
PRINCE	—	—	—	MEXICAN PRINCE	Sulina	and Tunis	L. Tyne,
CLAM	Colombo....	Balekappan	L. Oct. 6	MIRA	Philadelphia	San Francisco	Nov. 12
COL. E. L. DRAKE	San Francisco	Portland (O.)	L. Nov. 6	MUREX	Calcutta	Vladivostock	P. Del. Break.,
COWRIE	Cardiff	New York ..	Arr. Nov. 18	NARRAGANSETT..	New York ..	—	Nov. 8
CUYAHOGA	Tyne	Philadelphia	L. Nov. 5	NERITE	—	—	L. Oct. 19
CYMBELINE	Penarth	New York ..	P. Browhead, Nov. 18	NEW YORK	Southampton	New York ..	Arr. Nov. 20
CZAR NICOLAI II.	Batoum	Hamburg ..	L. Constant'ple, Nov. 15	OCEAN	New York ..	Antwerp	Tr. in China
DAGHESTAN	Batoum	Rouen	L. Nov. 18	OILFIELD	Philadelphia	Rouen	Seas
DAKOTAH	Canton	Hong Kong	Arr. Oct. 16	ORANJE PRINCE..	Havana	Flushing....	S'gld. Browhead,
DELAWARE	Barrow	Sabine Pass	P. Cape Henry Nov. 2	ORIFLAMME	Novorossisk	London	Nov. 17
DEUTSCHLAND ..	Tyne	New York ..	Arr. Nov. 15	OSCEOLA	Norfolk (Va.)	Wilmington	Arr. Nov. 19
DIAMANT	Stettin	Sandy Hook	P. Dunnet Head, Nov. 17	OTTAWA	London	Philadelphia	Arr. Nov. 18
EDWARD	Port Arthur (Texas)	Antwerp	L. Nov. 5	OURAL	Antwerp....	Philadelphia	L. Oct. 29
DAWSON	—	—	—	PALEMBANG	Pulo Samboe	Hong Kong..	L. Constant'ple,
ELAX	Savona	Messina	Arr. Nov. 16	PAULA	Pillau	Hamburg ..	Nov. 14
ELISE MARIE	Philadelphia	Swinemunde.	L. Nov. 13	PECTAN	Port Arthur	London	L. Nov. 12
ENERGIE	Danzig	Philadelphia	L. Tyne, Nov. 18	PENNOIL	(Texas) and Copenhagen	Philadelphia	P. Lizard,
ERIVAN	Tyne	Batoum	P. Sagres, Nov. 11	PERLAK	Tyne	Aroe Bay ..	Nov. 17
ETELKA	London	Philadelphia	Arr. Nov. 11	—	—	—	Nov. 5

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PHOEBUS	Hamburg and Tyne	New York ..	P. Dunnet Head, Nov. 8	SPONDILUS	Singapore ..	Europe	At Suez, Nov. 17-18
PINNA	Yokohama ..	Port Harford	L. Oct. 31	STANDARD	New York ..	Swinemuude	P. Butt of Lewis, Nov. 15
POTOMAC	Avonmouth	Philadelphia	P. Barry Island, Nov. 12	STROMBUS	Samboe	Channel	L. Nov. 6
PROMETHEUS....	New York ..	Hamburg ..	L. Nov. 15	SURAM.....	Tyne	Batoum	L. Nov. 14
PRUDENTIA	Shanghai ..	Tientsin	L. Oct. 6	SUWANEE	New York ..	Barrow	Arr. Nov. 15
QUEVILLY	Rouen.....	Philadelphia	L. Nov. 15	SVIET	Alexandria ..	Batoum	L. Nov. 6
RION.....	Penarth	Philadelphia	L. Nov. 9	TELENA	Cardiff.....	New York ..	P. Barry Island, Nov. 13
ROCK LIGHT	Ibrail	Amsterdam..	Arr. Nov. 18	TEREK.....	London	Port Arthur (Texas)	P. Dover, Nov. 10
ROMANY.....	Barrow	Kustendje ..	L. Nov. 15	TIFLIS	Antwerp	Batoum	P. Gibraltar, Nov. 20
ROSSIJA	Stettin.....	Cronstadt ..	L. Nov. 16	TIOGA	London	Galveston ..	L. Nov. 8
ROTTERDAM	Calcutta	Boston & New York	L. Port Said, Nov. 17	TONAWANDA	Muroran	—	L. Nov. 10
RUSSIAN PRINCE	Philadelphia	Galveston & Vera Cruz	P. Del. Break., Nov. 6	TROCAS	Balekappan	Hankow	Ashore below Kuitang, Nov. 13
SALAHADJI	—	—	Tr. Sts. Settlements and Java Seas	TURBO.....	Port Arthur (Texas)	Hamburg ..	Arr. Nov. 18, and S. 21 Tyne
SAN CRISTOBAL..	Swansea	Philadelphia	In Mumbles Roads, Nov. 6	TUSCARORA	Avonmouth..	Liverpool ..	Arr. Oct. 24
SAN IGNACIO	Philadelphia	Gijon	P. Del. Break., Sept. 16	TWINGONE	Madras	Rangoon ..	L. Oct. 28
DE LOYOLA	—	—	—	VEDRA.....	Yokohama ..	Palembang..	L. Oct. 29
SAXOLEINE	Kustendje ..	Rouen.....	L. Cete, Nov. 18	VILLE DE DIEPPE	Philadelphia	Rouen.....	L. Nov. 18
SEMINOLE.....	San Francisco	Tongkee	L. Oct. 23	VOLUTE	Tientsin	Shanghai ..	Arr. Nov. 13
SINGU	—	—	Tr. in East Indies	WASHINGTON....	New York ..	Rotterdam..	L. Nov. 13
SNOWFLAKE.....	London	Philadelphia	Arr. Nov. 14	WEEHAWKEN	Philadelphia	Hull	P. Scilly, Nov. 12
SOYO MARU	Antwerp	San Francisco	Off Ushant, Nov. 5	WILLKOMMEN....	Gothenburg	Philadelphia	P. Dunnet Head, Nov. 15
				WINNEBAGO	San Francisco	Canton	L. Oct. 5

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

November 22nd, 1907.

There are no alterations in the price of Petroleum to report, prices remaining for Russian and Roumanian, 6½d.; American, 7½d.; Water White, 8½d.

LUBRICATING OILS

are unchanged as follows :—

- American pale, £7 7s. 6d. to £11.
- American dark cylinder, from £9 2s. 6d.
- American filtered cylinder, from £11 19s. 6d.
- No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine has been fluctuating considerably between 35s. and 37s. 6d., and in consequence of a considerable fall in Savannah on Thursday the rise was checked, and the current price for Spot is now 36s. 6d.; for December 3d. higher, and for the first four months 37s. 3d. to 37s. 6d.

LIVERPOOL OIL MARKET.

November 21st.

Refined oils are quiet, and sellers quote 6½d. for Russian, Galician or Roumanian; and 7½d. to 8½d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0½d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, November 21st.

Refined, in cases, is steady at 10.90; Standard White, 8.75; Credit balances, 1.78c.

PHILADELPHIA, November 21st.

Standard White is still quoted at 8.70.

RUSSIA.

BAKU, November 18th.

The Baku oil market is firm. Light crude oil, spot, 24½ copecs per pood; residuals in ships, 25 copecs; crude, in ships, 26 copecs; kerosene in ships, 33 copecs.

BELGIUM.

ANTWERP, November 18th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, November 18th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34.25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, November 16th.

The kerosene market is firm. The price of American Standard White is 7.55 marks per 50 kilos; Russian, 7.35 marks.

ROUMANIA.

November 14th.

Crude oil from different fields, including	Francs.
pipe line charges, per 100 kgs.	4.05-4.15
Refined oil, exclusive of taxes	5.50-8.00
Motor benzine, including taxes	23.00-24.00
Benzine, doubly refined	25.00-26.00
Residuals in tank waggons, at refinery	3.60-3.80
Paraffin	120.00-125.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	6.75-7.25
Benzine, sp. gr. 0.710-0.715	20.00-21.00
" sp. gr. 0.715-0.720	18.00-19.00
" sp. gr. 0.730-0.740	14.00-15.00
" sp. gr. 0.745-0.755	12.00-13.00

INDIA.

BOMBAY, November 2nd.

Market still strong.

GREAT WESTERN RAILWAY.

THE Directors of this Company are prepared to receive Tenders for the purchase of Empty Casks and Barrels during the year 1908.

Forms of Tender (upon which alone Tenders will be received) may be obtained on application to the undersigned, by whom Tenders, marked outside "Tender for Empty Casks and Barrels," will be received on or before Monday, the 9th December.

The Directors do not bind themselves to accept the highest or any Tender.

G. K. MILLS, SECY.

Paddington Station, London, 20th November, 1907.

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IMPORTS of PETROLEUM into UNITED KINGDOM

*Specially prepared for
this Journal by . . .
the Custom House.*

FOR THE WEEK ENDED 11TH NOVEMBER, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
Nov.	LONDON—			
5	Fielder, Hickman and Co. . .	Lub.	15,800	New York
5	A. Brown and Co. . .	"	2,000	Hamburg
6	Beck and Pollitzer . .	Lub.Gr.	160	New York
6	Ragosine and Co. . .	Lub.	5,280	"
6	Mercantile Lighterage Co. . .	"	1,000	"
7	Beck and Pollitzer . .	"	1,600	"
7	Page, Son and East . .	"	240	Antwerp
8	T. H. Lee . .	"	50	Hamburg
8	Perkins and Homer . .	"	2,400	Philadel.
8	A. Brown and Co. . .	"	4,000	"
8	G. Jennings . .	"	4,840	"
9	Ocean Oil Co. . .	"	2,400	"
9	A. Brown and Co. . .	Lamp	4,000	"
9	Schlieman's Oil Co. . .	Lub.	5,000	"
9	Lubricating & Fuel Oils, Ltd.	"	6,230	"
9	Anglo-American Oil Co. (Ottawa)	Gas	975,830	Baltimore
11	E. J. Walkenshaw . .	Lub.	10,000	Philadel.
11	T. H. Lee . .	Lub.Gr.	990	Hamburg
11	W. H. Muller . .	Lub.	120	Rotterdam
11	Produce Brokers . .	"	4,000	Antwerp
11	Page, Son and East. .	"	320	"
	LIVERPOOL—			
5	Stockdale and Doel . .	"	3,000	Boston
5	Vacuum Oil Co. . .	"	2,400	New York
5	C. C. Wakefield and Co. . .	Lub.Gr.	80	Antwerp
5	Meade-King, Robinson & Co.	Lub.	2,400	Hamburg
6	Pickford's . .	L. Paste	410	"
6	Worthington and Boler . .	Lub.	4,000	Philadel.
6	Liverpool Warehousing Co. .	"	3,200	New York
7	Crew, Levick and Co. . .	"	4,940	Philadel.
7	American Line . .	"	1,080	"
7	W. B. Dick and Co. . .	"	29,620	"
7	Meade-King, Robinson & Co.	"	17,400	"
8	" . .	Lamp	20,000	"
8	Burnaby and Chantrell . .	Lub.Gr.	390	New York
9	Midland Railway . .	Lub.	890	Philadel.
9	Meade-King, Robinson & Co.	"	5,200	Baltimore
9	A. Hopps and Sons . .	M. Colza	6,490	"
11	Meade-King, Robinson & Co.	Lub.	2,920	"
11	Bramwell, Fern and Co. . .	"	2,240	Philadel.
11	Pickfords . .	L. Paste	1,240	New York
11	Valvoline Oil Co. . .	Lub.	13,940	"
11	W. Gibson and Sons . .	Lamp	2,050	Boston
11	Huxley and Co. . .	Lub.	360	Hamburg
	BRISTOL—			
5	H. R. James and Sons . .	"	420	New York
7	E. Stock and Sons . .	"	250	Hamburg
8	W. Smith and Co. . .	"	52,280	New York
8	H. R. James and Sons . .	"	19,760	"
11	Anglo-American Oil Co. (Potomac)	Lamp	1,076,840	Philadel.
11	" . .	Gas	125,980	"
11	E. Stock and Sons . .	Lub.	2,000	Hamburg

DATE	PORT AND IMPORTERS	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Nov.	CARDIFF—			
7	Guthrie, Heywood and Co.	Lub.	3,370	Baltimore
9	Homelight Oil Co. (Bloomfield)	Lamp	540,000	Batoum
	GRIMSBY—			
7	J. Sutcliffe and Son. . .	Lub.	120	Antwerp
7	" . .	"	550	"
	HULL—			
7	W. Gilyott and Co. . .	"	7,000	New York
7	Hull & Netherlands S.S. Co.	Tar Oil	3,240	Rotterdam
7	" . .	"	4,800	"
9	Wilsons and N.E. Railway Shipping Co.	Lub.	13,920	Antwerp
9	" . .	"	80	Hamburg
9	" . .	"	12,000	New York
	MANCHESTER—			
5	Lamport and Holt . .	"	1,500	"
5	W. Hodgson and Co. . .	Lub. Gr.	690	"
5	Bramwell, Fern and Co. . .	Lub.	830	"
5	Geo. B. Taylor . .	"	170,680	"
5	D. Currie and Co. . .	"	2,400	Hamburg
7	G. B. Taylor. . .	Lub. Gr.	50	"
7	Wilson, Sons and Co. . .	Lub.	430	Rotterdam
7	Meade-King, Robinson & Co.	"	4,000	Antwerp
7	D. Currie and Co. . .	"	1,600	Hamburg
7	Geo. B. Taylor . .	"	1,600	"
7	" . .	"	112,000	Philadel.
7	C. H. Morton and Sons . .	"	800	"
7	Bramwell, Fern and Co. . .	"	2,560	"
7	Crew, Levick and Co. . .	"	17,650	"
7	" . .	M. Colza	5,050	"
7	Meade-King, Robinson & Co.	"	2,000	"
7	" . .	Lub.	38,920	"
7	A. H. Dawson and Co. . .	"	2,400	New York
7	Liverpool Storage Co. . .	"	27,990	"
7	Homelight Oil Co. (Bloomfield)	Lamp	1,080,000	Batoum
9	W. Hodgson and Co. . .	Lub.	4,350	Riga
	NEWCASTLE—			
7	Tyne-Tees S.S. Co. . .	"	160	Hamburg
7	" . .	"	2,960	Antwerp
	NEWPORT—			
7	Jones, Heard and Co. . .	"	180	New York
	SOUTH SHIELDS—			
11	British Pet. Co. (Suram) . .	Lamp	275,000	"
	SWANSEA—			
5	Burgess and Co. . .	Lub.	130	Hamburg
	ABERDEEN—			
31/10	R. Cannon, Reid and Co.	Lamp	2,000	"
	DUNDEE—			
7	D. Alexander and Sons . .	Crude	240	"

MIDLAND RY-CARRIAGE & WAGON CO., LTD.,

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LONDON, E.C.

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVII. (New Series.)

DECEMBER 7TH, 1907.

No. 413.

Editorial Notes.

As we anticipated, the agitation **“Kicking against the Pricks.”** against the powers that at present be in connection with the Russian Petroleum and Liquid Fuel Co., Ltd., has now become so strong that the directors have been defeated upon their pet resolution to appropriate the funds of the preference shareholders' reserve fund for the redemption of debentures—a scheme which to our way of thinking always seemed something like “robbing Peter to pay Paul.” In order to make their resolution valid it was essential that it should be carried by a majority of three to one, and thus the actual figures of voting—203, 351 for and 112, 975 against—are convincing enough. And yet this comes in the face of the “vote of confidence” which was carried by proxies at a recent meeting. Still the board seem determined not to be outdone by the opposition if they can possibly avoid it, and so another meeting of preference shareholders is to be called for next Tuesday, when the resolution, which has already been so overwhelmingly defeated, will come again before the shareholders. Of the outcome we have no doubt, and it will be a surprise to us if the proxies against the board's scheme are not considerably augmented.

Even at what the directors are pleased to call the last moment, **Cunning, even to the Last Moment.** they exercise their cunning, as can be seen from the circular which has been issued, and which we reprint upon another page. Necessity is said to be the mother of invention, and driven almost to despair, the Russian Petroleum and Liquid Fuel Co.'s directors have put forward a cunning invention in the hope of attaining the desired result—taking £52,000 from the preference shareholders. One would have thought that the result of the voting would have been a sufficient set-off for the board against that mythical vote of confidence which they passed to themselves the other day. But such is not the case. They want more proxies, and so they seriously put it forward—in fact, they “are convinced” that the shareholders who gave proxies to Messrs. Lever and Burke have not really grasped the situation. Surely those “men of eminence and experience in City life” must know that what really is the whole source of difficulty in the present case is that the shareholders have grasped the situation, and that is why they have joined the opposition. Messrs. Lever and Burke have put the issue well to the shareholders, and had the board possessed half such honesty of purpose, they would long ago have admitted their lamentable failure, and given over the reins of management to others. The issue which the opposition has raised—that of a change in the management—is not a side issue at all. It is far from being foreign, and we give the preference shareholders credit for the strong stand they have taken in demanding that a change in the constitution of the

board must run concurrent with the appropriation of this £52,000. To act in any other way would simply be to throw good money after bad.

The remarkable success which is now to be noted in every branch of the **British Capital in California.** Californian petroleum industry has a peculiar interest to the investor to-day, for during the past few years no other centre of petroleum production has come in for so much general attention on the part of both operators and capitalists alike. Englishmen have oft, in times gone by, been accused of allowing opportunities to slip through their hands. This to a certain extent has been so, but to-day the average investor is far-seeing enough to recognise the remarkable future which lies before the Californian petroleum industry, and he is consequently acting accordingly. Several influential companies financed by Anglo-Californian capital are now energetically at work in the prolific territories of that Western State, and, judging by recent reports, the prospects in every case are most encouraging. One of these companies—the Anglo-Californian Oil Syndicate, Ltd.—held its first meeting this week in London, and the speeches (which are reproduced in other pages) unmistakably shew not only the sincerity of those who have the company in hand, but the confidence with which the future is looked forward to. There is, of course, not the slightest doubt that California is to-day occupying a most important place in the petroleum-producing countries of the world, and as time goes on its importance will necessarily become greater. We can only repeat the hope expressed by Mr. Shyvers—himself a resident for many years in that great oil State—that the whole of the English companies will participate in the success which undoubtedly awaits the Californian petroleum industry.

The exports of petroleum from America during October, a detailed list of which is given elsewhere in this issue, were largely in excess of those for the preceding month both in amount and value, and for the third time during the current year they have passed the 100,000,000 gallon mark. Compared with the total exports for a year ago, in quantity they fall slightly behind, yet in value there was a gain of over half-a-million dollars. From this statement it is clear that though the exports are now making headway, they still feel the effects of the unwise policy of the American Government in attempting to strangle this important branch of over-seas commerce. During the ten months ending with October of this year the exports of crude and refined oil, etc., amounted to 974,400,231 gallons, and were valued at \$70,562,138, as compared with 980,574,441 gallons, valued at \$67,733,092 for the same period ending with October 31st, 1906. This therefore represents a decrease of 6,174,210 gallons in amount and an increase of 2,829,046 in value.

A WELL-KNOWN CANADIAN DRILLER MAKES HIS HOME IN ENGLAND.

Mr. James G. Boyd, of Petrolia, Canada, one of the most well-known Canadian drillers, arrived in England last week to join the staff of the Deep Well Tool Co., of St. Albans. Mr. Boyd's long experience in many parts of the globe in conducting boring operations will make him a valuable acquisition to the above firm. Mr. Boyd first became associated with the deep well business in that school which has brought forth so many of the prominent operators in drilling—the oil fields in the Petrolia district of Canada. Since then Mr. Boyd has operated in Galicia, Roumania, Australia and Borneo, as well as in Alberta, Canada. It is interesting to here mention that the policy the Deep Well Co. has adopted in associating with their business only thoroughly practical men is meeting with the success it deserves. Although only having been established in this country some few months the works are kept very busy executing foreign orders, and the firm have in view an early extension of their premises.

BATOU PETROLEUM EXPORTS IN SEPTEMBER.

The exports of petroleum products from Batoum during September fell below the normal figure, having amounted to only 2,592,000 poods. There has been a great decline in bulk kerosene shipments, which amounted to only 795,000 poods. Case oil shewed an increase of 525,000 poods. In connection with the decline in bulk kerosene shipments there was a great falling off in arrivals of kerosene from Baku, which in September did not exceed 618,000 poods, in which, by the way, Nobel had no share at all. The consignees were chiefly the case oil manufacturer, who took 65 per cent., whilst the remaining 35 per cent. fall to the Caspian and Black Sea Society and the Caspian Society.

The shipments of lubricating oils were normal, even shewing slight signs of improvement, the figure being 1,119,000 poods. The following are the figures of arrivals from Baku, shipments from Batoum during September, and stocks on 1st October were as under:—

	Arrivals. Poods.	Shipments. Poods.	Stocks on Oct. 1st. Poods.
Refined Kerosene ..	618,000	1,320,000	1,427,000
Kerosene Distillate ..	—	—	108,000
Solar Oil	183,000	—	62,000
Machine Oil	664,000	822,000	789,000
Spindle Oil	71,000	131,000	26,000
Cylinder Oil	9,000	14,000	19,000
Vaseline	—	142,000	45,000
Lubricating Oil Distillate ..	—	—	12,000
Residuals	250,000	163,000	267,000
Other Products	27,000	—	1,000
Total	1,822,000	2,592,000	2,756,000

As will be observed from the above table, the stock of kerosene has declined during September by about 40 per cent. The stocks of lubricating oil have also declined, due to increased bulk shipments. The decline in kerosene bulk shipments shewed itself clearly in the exports to the United Kingdom, which amounted to only 210,000 poods, which is only about one-eighth of the normal quantity of former times. Shipments to France,

which usually consist chiefly of kerosene distillate, are also declining steadily. Exports to Germany remain unchanged at 355,000 poods. Belgium and Holland together took 404,000 poods, and other European countries 211,000 poods; Malta, Tunis and Algeria took 270,000 poods of kerosene in bulk. Another cargo of 311,000 poods was shipped to Far Eastern ports; to the Piraeus 106,000 poods; Turkey and Balkan States 437,000 poods. To Russian home ports there were bulk shipments of an aggregate of 212,000 poods.

LONDON OIL SHARE MARKET.

FRIDAY, DECEMBER 6TH, 1907.

The general improvement in the outlook of the Stock Markets commented upon in our last issue has been materially assisted by the alteration for the better in the monetary situation, and although the directors of the Bank of England have not yet considered the time ripe to reduce the Bank Rate from 7 per cent., numerous indications point to its reduction in the near future.

Although an all-round advance has taken place on the Stock Markets, up to the present the Oil Share Group has remained practically stationary, although we are pleased to report three out of the four alterations which occur in the list on balance shew an improvement.

The first alteration which took place from the figures published in our last issue, occurred on Wednesday, the 27th ult., when Russian Ordinary declined 3d., from 2s. to 3s. to 1s. 9d. to 2s. 9d. On the following day Californian Oilfields gain 6d $\frac{1}{8}$, rising from 4 $\frac{7}{8}$ -5 $\frac{1}{8}$ to 5-5 $\frac{1}{4}$, while on Monday, December 2nd, some strong buying carried the price up another $\frac{1}{2}$ per cent to 5 $\frac{1}{2}$ -5 $\frac{3}{4}$. Spies Petroleum gained $\frac{1}{16}$ on Wednesday at $\frac{5}{16}$ - $\frac{3}{8}$.

Shell Transport Ordinary have been the only really active market, the demand for shares continuing day after day, and although latest prices are not quite at best, as we write an improvement of 5s. per share is registered, viz., from 39s. to 40s. to 44s. to 45s.

The end-November settlement commenced on the 26th ult., when rates of interest ruled much the same as last time. A comparison of the making-up prices fixed shews no improvement on the fortnight, while Anglo "A" lost 3d. at 1s., against $\frac{1}{16}$ last time, Baku Ordinary 6d. at $\frac{1}{8}$, against 3s.; Californian Oilfields $\frac{1}{16}$ at 5, against 5 $\frac{1}{16}$; Shell Transport 2s. at 2, against 42s., and Spies 3d. at 6s., against 6s. 3d.

No change occurred in the following shares:—Baku Preference at 4s. 6d., Russian Ordinary 3s., Preference 4s., Schibaieff Ordinary $\frac{1}{8}$, and Preference 1 $\frac{1}{4}$.

SPOUTER AT SURAKHANY.

The *Trade and Industry Gazette* publishes the following telegram, received from the Baku Exchange Committee in reply to an enquiry:—

The spouter flowing at Surakhany from a depth of 1,575 feet yields a crude oil of a specific gravity of 0.820. A sample of the oil from the storage tank shews a gravity of 0.830. Fractional distillation yields 69 per cent. illuminating oil. During the first five days 150 poods of oil was collected. At the time of wiring the spouter was throwing up only gas and sand.

THE PETROLEUM INDUSTRY OF JAPAN.

OPERATIONS OF THE NIPPON OIL COMPANY.

By KAZUTAKA ITO.

That the existence of petroleum in Japan was noticed by its people as early as in the seventh century can be confirmed by referring to the country's history, in which is recorded that in 668 A.D. the people of Echigo paid homage to the court of Emperor Tenji, offering a marvellous liquid called Moyuru Mizu, or inflammable water, which must have evidently been the natural oil. For nearly a thousand years following the event just mentioned, petroleum was looked upon more as a wonder of Nature than as a heat and light-producing agent; and though there are records shewing the oil was utilised to a very limited extent in some sections of Echigo, by collecting it from seepages and shallow dug wells, more

than three hundred years ago, the actual history of the Japanese oil industry dates back to an early part of the present Emperor's reign, when the Japanese found out the then newly-imported kerosene to be a refined product of petroleum.

This knowledge led to a great activity in digging for petroleum in oil-bearing territories in Echigo, and in refining the product for obtaining the new illuminating oil—though in a very crude manner, based on information obtained from books. Amaze, a small seaside town on the coast of Echigo, on the hill back of which already existed some old dug wells, became the principal centre of this activity. The hill was soon covered with new dug wells, and the digging followed the trend of oil-sand through the town, down to the beach, and even out to the sea. Some of the wells came in with a daily production of 20 koku (=1.136 barrels of 42 gallons), but, in anticipation of finding a richer sand beneath the deepest one that could be reached in dug wells—which is at about 600 feet—repeated efforts were made to drill a deep well with American rig and tools. The results, however, were complete failure, owing to the lack of proper technical knowledge and imperfection of the outfits used, and the honour of being the first successful

driller was reserved to fall into the hands of the Nippon Oil Co. later on.

The Nippon Oil Co. was incorporated in the spring of 1888 with capital stock of Yen 150,000, and, unlike other companies then existing, the Nippon had on its board of directors only men of the highest social and financial standing. The company started its operations by digging several wells on one of the holdings secured in Amaze, and though these wells gave a paying production, placing the owner on a good footing from the start, the first move by which it was able to lay a secure foundation for future success was the introduction of the American method of drilling. Mr. Yamaguchi, one of

the directors, who made a trip abroad not very long after the incorporation of the company, paid visits to some of the important oil fields of America while he was in that country, and made a careful study of the *modus operandi* of petroleum exploitations. He sent to



SOME OF THE STORAGE TANKS OF THE NIPPON COMPANY.

his associates at home a report, in which he embodied the result of his observation, making a strong recommendation for introduction of the American drilling system by the Nippon Oil Co. The management, promptly acting on this report, sent for a complete set of drilling outfit and an expert driller, placing the matter in the hands of the Japanese Consul at New York. On their safe arrival at Amaze in the fall of 1890, a well was rigged over one of the old dug holes and started to drill it down in December of the same year. The well was completed in April of the next year at a depth of 700 feet, and initially produced 40 koku a day of very fine oil, having a gravity of 42° B. Thus encouraged, the company drilled several wells in succession and struck oil in all of them at depths ranging from 1,200 feet to 1,500 feet, and producing from 80 to 180 koku a day. This decided success opened a new era in the history of the Japanese oil industry, and led to the subsequent rapid development of Amaze and other fields

as well, not only by the Nippon, but by others also.

The Nippon Oil Co. had to refine its production, as there were then no means of marketing crude oil; and in this also, as was the case in drilling, the company made a strong effort to introduce American methods, which has resulted in equipping a refinery built in Amaze in a way it could turn out a product fairly comparing with the kerosene imported from abroad before anyone else.

This readiness for adopting the most rational and improved methods available in exploiting petroleum has always been a distinctive feature of the Nippon Oil Co. The company has been sending experts of its different departments to America in order to let them become familiar with the latest phases of the oil industry of the country.

The president himself visited the oil fields of America and Russia twice, and made a thorough study of the way oil is exploited in those countries. On the other hand, the company has employed on different occasions American experts in some of its departments in order to let a large number of the employés receive a practical training from them. It is to be mentioned to the credit of the Nippon that the information of practical value acquired by the means mentioned is not only turned to its own account, but freely published for the benefit of others.

The Nippon's management, though manifesting such enthusiasm as already referred to, was never carried away by this zeal, it being well tempered with sound judgment. It is, then, quite natural that the company, under such a judicious management, has ever been prosperous and its interest rapidly and steadily growing, calling for repeated increases of the capital, until it has now reached Yen 10,000,000. The Nippon Oil Co. now occupies the most prominent and influential position among the oil companies operating in Japan, with a prospect more encouraging than ever, especially in view of a large and profitable absorption lately made of the entire property in Echigo of the International Oil Co., a Standard's offshoot incorporated in Japan with a capital of Yen 10,000,000. The purchase consists of a large number of valuable holdings, both producing and undeveloped, with an extensive stock of drilling outfits and other oil well supplies; a refinery, which is the most modern and best equipped in the country; as well as pipe lines, tank cars, and other shipping installations. The property, in the hands of the Nippon, is proving itself to be a very valuable acquisition to the company, and already commencing to yield a rich return.

The Nippon's total production for the first six months of this year was 193,765 koku, being nearly a quarter of the total production of Echigo covering the same period, which was 840,424 koku. On account of the recent acquisition of the International Oil Co.'s producing leases and of good territories found by wild catting, the company's production has of late been shewing a marked increase, the latest return being 1,604 koku a day. The detailed statement of the same, by fields and

against the total of each field, with the percentage of the Nippon's quota, is as under:—

Fields.	Total Daily Production, in Koku.	Nippon's Daily Production, in Koku.	Percentages of Nippon's Quota.
Nishiyama ..	959	555	57.8
Higashiyama ..	955	156	16.3
Niitsu ..	2,647	675	25.9
Kubiki ..	263	198	75.2
Amaze ..	34	20	58.8
Ojiya ..	17	—	—
Total, Echigo ..	4,874	1,604	32.9

Together with the holdings and drilling materials, the Nippon has taken over the entire field force of the International, comprising men who had a thorough training under American experts. The activity of the Nippon's field operations, consequently has been almost doubled within the last few months, the present number of the wells drilling and the same rigging being respectively 62 and 21. In view of these facts, the company's management is probably not very unreasonable in expecting to see the total production of this year reach half-a-million koku, against 237,348 of 1905 and 282,122 of 1906.

The company now owns three plants for refining its own production as well as what crude it buys. The chief plant is at the Kashiwazaki refinery, in a town of the same name adjacent to the company's headquarters. The plant was built in 1899, with still capacity of 500 koku daily, for supplementing the one then existing in Amaze. The equipment, though far ahead of the others at that time, was quite primitive, with cheese-box stills and hand-churning treating vats. By repeated extensions and improvements, it is at present the largest and one of the best equipped plants in the country, the still capacity being now 3,000 koku a day. The Naoyetsu refinery was recently bought from the International Oil Co. The plant was erected according to plans and specifications, and by experts sent by the Standard Oil Co., and consequently the equipment is thoroughly modern. The daily still capacity of this plant is 2,000 koku. The third plant is the Niitsu refinery, built in close proximity to the Niitsu oil field, for handling the heavy crude of the same field, having a capacity for running 500 koku a day.

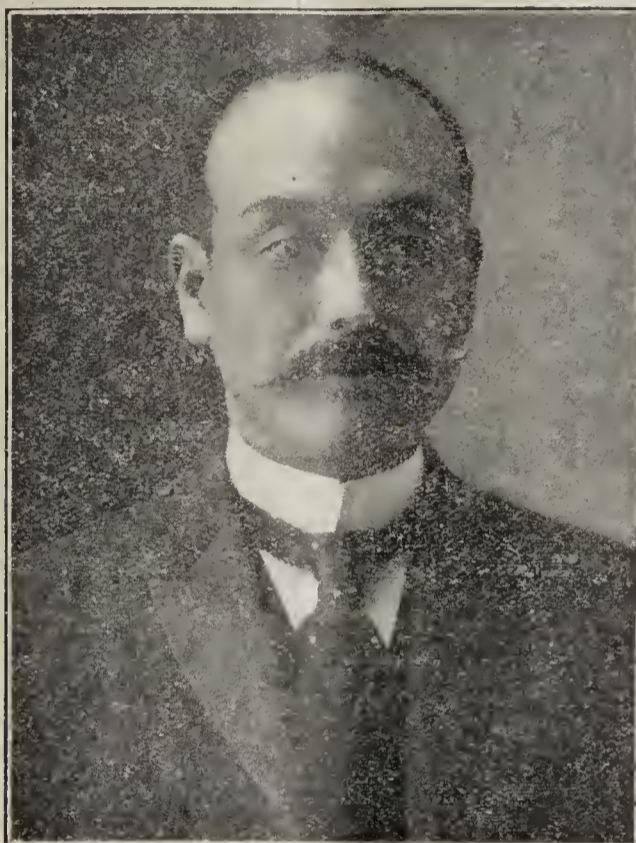
The company owns for transporting crude, refined and fuel oils: 38 miles of 2-inch, 39 miles of 3-inch, and five miles of 4-inch pipe lines; besides 98 tank cars and a coasting steamer.

This article would be scarcely complete without a sketch of one who has brought forth the Nippon Oil Co., and by his assiduous efforts and undivided devotion fostered it through its early stages to its present state of vigorous maturity. Mr. Hisahiro Naito, the subject of this sketch, was born in Ishiji, Echigo Province, July 25th, 1859, and comes of a family most prominent among the landed gentries of the province. At the age of 13 he entered a Government School in Kashiwazaki, which was then the only institution in Echigo for teaching new branches of learning introduced from the western nations. After two years of the study, the aspiring youth, not contented with what the country school could afford, ran away to Yokohama, and there entered a



IN THE NISHIYAMA FIELD.

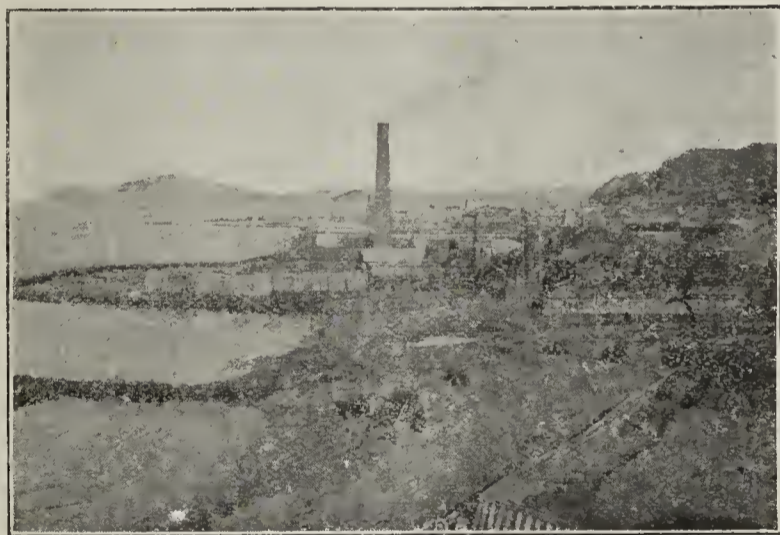
school conducted by an Englishman, where he remained till he had completed his course. By coming into direct contact with foreigners, and by associating with some of the most advanced thinkers among his own countrymen, while he was in the school at Yokohama, the young Naito became thoroughly imbued with the unprejudiced and progressive spirit which so distinctly marked his subsequent career. On his return home, soon after his graduation from the school, the townsmen of Ishiji were not slow in recognising in Mr. Naito a young man of remarkable ability, sound judgment and integrity. He manifested an active interest in the municipal affairs of his town, and at the age of 21 he was elected mayor, filling the position in a manner even exceeding the expectations of his supporters. The growth of his political influence was quite rapid, and he was elected a member of the Prefectural Council at the age of 27 and that of the Imperial Diet at the age of 35. A man full of public spirit, Mr. Naito was ever ready to support any undertaking that tended to promote the welfare of the community, and it is this proclivity that primarily induced him to put his hand in the oil business. He was prominently identified with the movement of Shokusan Kyokwai, a society organised in 1885 by the most influential men in Echigo, having for its object the promotion of the industrial interests of



THE PRESIDENT OF THE NIPPON CO.

the province. Among the various publications the society were receiving as donations Mr. Naito one day came across an exhaustive report on the American oil industry, received from the Japanese Consul at New York; and he became, after careful study of the contents, strongly convinced of an urgent necessity of, fostering the same industry, lately started in Echigo by more rational and modern methods. Believing the situation demanded more direct measures than were feasible within the scope of the society's line of action, he conceived at once an idea of organising a company for demonstrating the proper method of exploiting petroleum. He worked up his idea into definite shape, and drew it up in the form of a prospectus, which he

submitted to prominent members of the society for their endorsement. The oil business was then conducted on a highly speculative basis, and no sound business men would condescend to be classed with oil men. It was then quite natural that Mr. Naito's apparently quixotic proposition at first received no favourable consideration from the men to whom he appealed, and it was by dint of his undaunted zeal, combined with sound arguments, supported with facts and figures, that he finally succeeded in securing their active co-operation. As the result, the Nippon Oil Co. was brought into existence in 1888, as already mentioned, and Mr. Naito was naturally elected president, a position he occupies up to the present time.



AMAZE: THE CRADLE OF THE NIPPON CO.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO DECEMBER 2nd, 1907.

IN GALLONS.

[ALL RIGHTS RESERVED.]

COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Nov. 18.	From Jan. 1.	Since Nov. 18.	From Jan. 1.	Since Nov. 18.	From Jan. 1.	Since Nov. 18.	From Jan. 1.	Since Nov. 18.	From Jan. 1.	Since Nov. 18.	From Jan. 1.	Since Nov. 18.	From Jan. 1.	Since Nov. 18.	From Jan. 1.
Austria ...	—	—	4,660	84,240	—	67,770	—	—	—	—	—	—	—	—	4,660	152,010
Belgium ...	—	153,410	25,410	675,315	—	—	—	310	—	120	4,120	—	—	860	25,530	834,015
Canada ...	—	—	—	—	—	8,800	—	—	—	—	—	—	—	—	—	8,800
Dutch India.	—	—	—	—	—	—	—	—	2,128,920	23,241,730	73,500	73,500	—	—	2,202,420	23,315,230
Germany ...	19,920	2,801,225	41,780	1,333,670	—	2,000	—	70	—	80	—	—	5,140	—	61,700	4,142,185
Holland ...	—	1,070	—	26,750	—	—	—	—	4,410	591,330	81,670	81,670	—	122,270	86,080	823,090
Roumania ...	—	7,039,290	—	—	—	—	—	7,295,090	—	1,459,000	—	238,700	—	—	—	16,032,080
Russia ...	—	28,509,200	29,720	3,839,070	—	125,960	—	887,040	309,000	321,690	—	—	—	1,423,780	338,720	35,106,740
U.S.A. ...	8,323,320	98,389,560	1,402,720	37,211,795	5,460	860,120	2,257,090	48,550,410	—	5,478,610	—	5,677,570	12,880	1,828,360	12,001,470	197,996,425
Other Countries	—	950	400	79,945	—	4,760	—	—	—	2,500	—	40	—	140,320	400	228,515
	8,343,240	136,894,705	1,504,690	43,250,785	5,460	1,069,410	2,257,090	56,732,920	2,442,450	31,099,060	155,170	6,071,480	12,880	3,520,730	14,720,980	278,639,090

THE RUSSIAN PETROLEUM AND LIQUID FUEL COMPANY, LTD.

STRAIGHT WORDS OF WARNING TO THE SHAREHOLDERS.

The executive of the shareholders committee has issued the following circular in reply to that of the chairman:—

The directors have issued a notice convening another meeting of preference shareholders in order to submit a second time the resolution on which they have already been defeated, and they ask for your proxy, but they do not vouchsafe any information as to the future position of the company.

Under the present system matters have gone steadily from bad to worse, though year by year the chairman has supplied the most optimistic forecasts of what was about to happen. You surely are not prepared to throw away the only weapon you possess against the continuation of this monumental ineptitude. We therefore ask you to send your proxy to us.

The chairman's letter of November 30th is incorrect and misleading. He, in the first place, states that "the efforts and speeches of the leaders of the opposition have been almost entirely devoted to asserting their claim to nominate four directors." This is not so. The committee did not seek seats on the board, but asked, and tried to obtain, a committee of investigation in order to ascertain and report to the shareholders the real position of the company before asking their friends to find additional capital. The chairman stubbornly refused to permit an enquiry—thereupon we asked for four seats.

Two seats were offered, and refused, in consequence of our financial advisers informing us it would be difficult, if not impossible, to raise the sum of £100,000 (the amount we suggested as necessary), unless there was a material alteration in the *personnel* of the board; secondly, the chairman says "if this money is not paid on due date the debenture holders can seize the property." We believe, however, the trust deed provides three months' grace.

The chairman at the last meeting said he had laid the financial position before us. It is true, and it is worse than we anticipated. Mr. Lever asked at the last meeting for particulars of the investments and securities standing in the last balance-sheet (page 9), at the sum of £75,288 4s. 7d., but the information was not supplied, somewhat ominous, when you consider that the directors in their balance-sheet of 1904 discontinued the practice that had prevailed of enumerating them in detail.

We also asked for particulars of the prices now being realised for the company's oil, and this information was likewise refused.

The board misrepresent the strength of the opposition. The majority of independent shareholders have supported the committee. But for the vote of the Dutch Trust (which is not financially interested in the company, and does not even represent the views of the actual Dutch warrant holders), and but for the votes of the directors, the promoters, and their friends, the board would have had only 73,000 votes against 113,000 in favour of the committee.

Under these circumstances it is imperatively necessary you sign enclosed proxy and return to us by an early post, to be used if in the meantime we do not come to some satisfactory agreement with the directors. In any case we could not approve their loosely drafted resolution, and should have to insist on its being clearly stated that this £52,500 shall be replaced before any distribution to the ordinary shares, and we should also require an undertaking from the directors that the resolution was without prejudice to any rights already accrued.

The circular is signed by Mr. Wm. Henry Burke, chairman of the executive committee, and the following members: Messrs. A. Levy Lever, M.P.; F. Shaw Kennedy, J.P.; and Elliot Pearson.

THE DIRECTORS' SCHEME DEFEATED.

The circular issued by the Chairman of the above company to the preference shareholders, and which deals with the scheme for the appropriation of £52,500 from the preference shareholders' reserve fund, is self-explanatory. It is as under:—

I beg to inform you that the resolution dealing with the preference fund has been defeated by the exercise of proxies given in favour of Messrs. Lever and Burke, the vote in favour of the board's resolution being only 203,351 as against 112,975, while a majority of 3 to 1 is necessary to make it valid.

The existence of the company is therefore endangered by the action of about one-fifth of the preference shareholders, and the board consider that the votes of this one-fifth have been used upon an issue foreign to the resolution, in that the efforts and speeches of the leaders of the opposition have been almost entirely devoted to asserting their claim to nominate four directors, thus giving the minority an actual majority on the present board.

The object of the board's resolution is solely the advance of £52,500 to pay the sinking fund of the first debentures due on 1st January next, a date which involves the necessity of an immediate decision. If this money is not paid on due date the debenture holders can seize the property, including the whole of the reserve fund, and a vote given against paying the debenture sinking fund, by the only means available, is simply suicidal.

The board are convinced that the preference shareholders who gave proxies to Mr. Lever and Mr. Burke have not really grasped what would happen if their proxies were exercised against the board, and they feel it their duty to appeal to them once more to give either proxies or a personal vote in favour of the resolution, which will be again submitted at a meeting of preference shareholders to be held on the 10th December.

In the present circular the board prefer not to discuss the side issue raised by the opposition respecting a change in the board, but at any time they are ready, if desired, to give a separate opportunity for its full discussion and to take another vote upon it. Now, they simply urge on the preference shareholders, in their own interests, to vote this money.

The resolution to effect it runs as follows:—

"That the board be and it hereby is empowered to apply from the investments of the preference shareholders' reserve fund any sum required, not exceeding £52,500 to the redemption of first debentures on or before 1st January, 1908, upon the terms that any sum so borrowed from the preference shareholders' reserve fund will have a first claim for repayment, with interest at 6 per cent. per annum in priority to any distribution on the ordinary shares."

I would add that the passing of this resolution will materially assist the board in the efforts which they are making to raise the additional working capital required to carry on the company.

MISCELLANEA.

BAKU PRODUCTION DURING OCTOBER.

The production of crude oil at the Baku oil fields during October amounted to 39,027,000 poods.

The production of the leading firms was as under:—

	Poods.
Nobel Bros.	4,600,000
Caspian and Black Sea Society	2,800,000
Mantascheff and Co.	2,400,000
Baku Naphtha Co.	2,200,000
Caspian Society	1,700,000
Mirzoeff Bros.	1,300,000
Russian Naphtha Co.	1,200,000
Baku Russian Petroleum Co., Ltd.	1,100,000
Aramazd Co.	1,100,000
Russian Petroleum and Liquid Fuel Co., Ltd.	1,100,000
Naftalan Co.	1,000,000
Schibaieff Petroleum Co., Ltd.	1,000,000
Moscow-Caucasian Co.	1,000,000
Pitoeff and Co.	800,000
Bibi-Eybat Petroleum Co., Ltd.	800,000
Zoubaloff	800,000
Nagieff	800,000
Nefi	800,000
European Petroleum Co., Ltd.	600,000
Ter-Akopoff	600,000
Tiflis Co.	500,000
Shikhovo Co.	500,000

PETROLEUM NEAR TIFLIS.

The *Trade and Industry Gazette* has recently published a telegraphic report announcing the strike of an oil spouter near Tiflis. The following few facts in connection with the matter are not devoid of interest:—

The municipality of Tiflis owns 46 acres of petro-liferous land in the locality of Navtluga. There were there a few primitive hand-dug wells, in which oil was oozing out, which has for a long time been raised by the local natives for various purposes. A few years ago half of this land was leased to a Baku merchant named Ter Markaroff, who immediately began to equip the plot for exploitation. All these installations, however, were destroyed during the conflicts between the Armenians and Tartars. Lately the work of drilling was resumed on this plot. On the 6th November it was reported to the Tiflis Town Council that the oil in Mr. Ter Markaroff's wells had commenced to bubble, spouting up at times. Oil has also been found by private owners having lands adjoining the municipal land. At the time of writing the well had reached 322 feet, of which 154 feet was in a rocky formation; the liquid flowing over the casing was warm water (15° C.), with thick masses of oil, and smelling of sulphur. The industrial value of the deposits can only be determined after the rocky ground has been passed through.

GROSNY PETROLEUM PRODUCTION.

DETAILS FOR AUGUST AND SEPTEMBER.

According to official statistics, the production of crude oil at the Grosny oil fields in August amounted to 3,537,564 poods, and the total production for the first eight months of 1907 was 25,458,756 poods. To this latter figure (3,493,910 poods), August shews an increase

in production against, due to the increased yield of spouters—784,000 against 549,000 poods.

The production of the leading firms in August was as follows:—Akhverdoff, 1,717,600 poods (including the whole of 784,000 poods produced by spouters); Spies Petroleum Co., Ltd., 620,940 poods; Anglo-Russian Maximoff Co., Ltd., 598,800 poods; Kasbeck Syndicate, Ltd., 156,250 poods; Tcheleken Daghestan Co., 121,645 poods; and North Caucasian Oil Fields, Ltd., 106,600 poods.

The total production for September amounted to 3,093,971 poods, to which spouters contributed only 169,500 poods, against 784,000 poods in August. The production by baling shewed an increase, but not sufficient to cover the shortage in spouters.

The production of the leading firms in September was:—Akhverdoff Co., 1,337,900 poods; Spies Petroleum Co., 636,125 poods; Anglo-Russian Maximoff Co., 494,606 poods; Kasbeck Syndicate, Ltd., 158,450 poods; Tcheleken Daghestan Co., 108,380 poods; and North Caucasian Oilfields, Ltd., 102,860 poods.

At the end of September there were at the Grosny oil fields altogether 273 boreholes, of which 165 were producing, 47 were in boring or deepening, 37 inactive, 12 undergoing repairs and 7 were represented by derricks only.

OPERATIONS OF ROUMANIAN REFINERIES.

STATISTICS FOR THE FIRST NINE MONTHS OF 1907.

The quantity of crude oil delivered to the Roumanian petroleum refineries during the first nine months of 1907 amounted to 698,740 tons, against 567,835 tons in the corresponding period of 1906, and 366,287 tons in 1905. The output of various products was as under:—

	Nine Months, 1907. Tons.	Nine Months, 1906. Tons.	Increase or decrease in 1907 against 1906. Tons.
Benzine	105,456	84,396	+ 21,060
Illuminating oil ..	196,023	168,822	+ 27,201
Lubricating oil ..	39,441	41,691	- 2,250
Residuals and distillate	334,309	253,544	+ 80,765
Total	675,229	548,453	+ 126,776

The quantities of various products delivered by the Roumanian refineries for home consumption in the first nine months of 1907, compared to the corresponding period of 1906, was as under:—

	Nine Months, 1907. Tons.	Nine Months, 1906. Tons.
Benzine	462	387
Illuminating oil ..	23,082	20,958
Lubricating oil ..	4,130	4,481
Residuals	237,018	165,333
Total	264,692	191,159

The stocks of various products at the refineries on 30th September, 1907, compared to 30th September, 1906, were:—

	30th Sept., 1907. Tons.	30th Sept., 1906. Tons.
Benzine	33,420	17,089
Illuminating oil ..	66,608	50,292
Lubricating oil ..	22,053	29,459
Residuals and distillate	56,532	71,272
Total	178,613	168,112

LETTERS TO THE EDITOR.

THE ADVANTAGES OF OIL FUEL.

To the Editor of the PETROLEUM REVIEW.

Sir,—An article appeared in the last issue of the PETROLEUM REVIEW (page 296) under the heading, "The Use and Advantages of Oil Fuel upon Steamers."

It might interest many of the readers of the REVIEW to consider what effect the use of oil fuel would have upon the speed of the "Lusitania." The following would be among some of the benefits derived from its use:—

No smoke; the 192 stokers and 120 coal trimmers would be left ashore, and 27 intelligent men of the greaser class would be employed to attend the oil burners and regulate the water feed to the boilers.

One water attendant and one burner tender per stoke-hole per watch would meet all needs. There would be available accommodation for, say, a further 250 third-class passengers. Some 600 tons of oil fuel per day would accomplish more than the 1,000 tons of coal per day now used, and 2,000 tons less fuel would be necessary per trip from land to land.

Presumably the "Lusitania" carries coal for the double trip, "Out and Home," and in that case 4,000 tons less fuel might be carried if oil were used, and the cubic space representing this saving of weight could be utilised for merchandise and for the earning of dividends. This is on the assumption that the vessel utilises her present bunkers for oil fuel; but, as a matter of fact, the oil fuel could be carried in the double bottom, and serve as ballast, and on one compartment being emptied of oil fuel, sea water could be admitted to preserve the trim of ship, if it were desirable. In this event, the whole of the existing bunkers would be made available for cargo.

When coal is used for fuel, the fires become clinkered up periodically, and there is also the inevitable deposition of soot in the boiling tubes.

The "Lusitania" has 192 fires to produce 68,000 indicated horse-power, and on the assumption—a very

fair one—that 32 fires are cleaned every watch (say 12 hours after leaving Queenstown), it will be seen that about 10,000 indicated horse-power is lost every four hours through the operation of burning down and cleaning fires alone.

It is difficult to find regular stoking where so many men are employed, some of whom may be sadly inefficient as stokers. Irregular stoking will account in some cases for as much as 10 per cent. loss of steam throughout the whole voyage, and added to this there is the steady lowering of the efficiency of the boilers, through the deposition of the soot in the boiler tubes.

Liquid fuel and automatic stoking would ensure steady steam (that is steady rate of progression) from land to land. The efficiency of the boilers would be unimpaired, because always in a state of cleanliness. From an approximate estimate of the several factors which go to determine a speedy voyage, it is safe to say that the use of oil fuel would diminish the time necessary to accomplish the voyage by eight hours. Other factors for the shipowners' consideration are as follows:—

It takes 35 men two and a-half hours to put 80 tons of coal on board a liner from lighters. As against this, a steam pump can put 300 tons of liquid fuel aboard in one hour, silently and cleanly.

The whole army of lightermen, coal-heavers, firemen, and coal-trimmers, who are at present the bane of an engineer's life, would be dispensed with for sea-going purposes, and they would find more congenial employment under better conditions of life as "long shore men," handling the extra cargo that the ship would land on every voyage.

Yours faithfully,

Imperial Chambers,
62, Dale Street,

J. J. KERMODE,
M.I. Mech. E.

Liverpool, 23rd November, 1907.

ENGLISH PATENT.

APPLICATION FILED IN GREAT BRITAIN.

Process for Deodorising Naphtha.—Romolode Fazi, Frederick Grill Claussen, and George Talbot Burrows Cobbett, 37, Essex Street, Strand, London. No. 25711 of 1907.

GULF REFINING CO.,

Refiners of Indian Territory and Texas Petroleum.

We make a Speciality of

SUPERIOR LUBRICATING OILS OF HIGH VISCOSITY AND LOW COLD TEST.

Our Kerosene and Gasoline are manufactured from high grade Indian Territory Crude Oil.

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THE RUSSIAN PETROLEUM AND LIQUID FUEL COMPANY, LIMITED.

PREFERENCE SHAREHOLDERS DEFEAT THE BOARD'S PROPOSALS.

In accordance with the decision agreed to at the previous meeting, as was recorded in the last issue of the REVIEW, the adjourned meeting of preference shareholders in the Russian Petroleum and Liquid Fuel Company was held on last Tuesday week at Winchester House, E.C., for the purpose of considering a resolution empowering the board to apply from the investments of the preference shareholders' reserve fund any sum up to £52,500 to the redemption of the first debentures on or before January 1st next.

The chairman of the company—the Hon. EVELYN HUBBARD—presided, and there was a large attendance.

At the outset the CHAIRMAN read the correspondence which had passed between Mr. W. H. Burke (representing the preference shareholders' committee) and the board since the preceding meeting, in one of which Mr. Burke detailed the proposals to which the committee would be willing to agree. These were:—(1) That the committee be allowed to nominate four directors for seats on the board. The committee, Mr. Burke said, felt that would inspire some confidence in the shareholders' minds in the future prospects of the company; (2) that interest at the rate of 4 per cent. per annum be paid on the borrowed money until replaced, it being, of course, clearly understood that no dividend be paid to the ordinary shareholders until the whole of the sum borrowed has been so replaced; (3) that the committee be permitted to appoint an independent expert, and a representative to accompany him to Baku, at the expense of the company, and to report to them on the prospects of the property and the working arrangements that exist, and whether a change was or was not necessary; (4) that an interim balance sheet or report be prepared by the accountants and at once submitted to them.

The Chairman then proceeded to point out that it appeared to him that the committee, in proposing that bargain, were altogether travelling outside their powers. Their reference was limited strictly to the financial question. All they had to report to the shareholders was whether or not they considered the proposed advance from the preference reserve fund reasonable and necessary under the circumstances of the case. That was the point. The only terms that they were authorised to discuss were the terms which such advance, if made, should carry with it, and on that point the directors considered that their proposal was inadequate. An advance of £50,000 could not be raised at the present time at anything like 4 per cent., as, of course, they all knew, and the board would propose that any advance sanctioned from the fund should carry interest at the rate of 6 per cent. until repayment, which repayment had to precede any distribution whatever on the ordinary shares. With regard to the committee's demand that they should be given four seats on the board, which, on the present number of seven directors, meant a majority of the board, the board did not consider it open to them—especially in view of the vote of confidence at the last meeting, for which over 500,000 proxies were deposited in their favour, as against some 170,000 for the opposition—to hand over the control to four other gentlemen of whose special qualifications for the post they were ignorant, except at the demand of the shareholders themselves. They were, however, quite ready to put it to the test; and if that vote was passed, with the assistance or by the abstention of the opposition, the board would give every facility for the summoning of a special general meeting, which would decide on the committee's proposals.

By agreeing to allow the advance asked for from the fund, the preference shareholders gave up nothing, but gained a very tangible advantage. They averted the imminent risk which confronted them, should the sinking fund not be provided for, of the debenture holders stepping in. That meant that any control of the company would pass definitely out of their hands into those of the debenture holders' nominees, and so the shareholders would stand to lose—not merely the amount advanced from the fund, but the whole of the fund itself. He desired that clearly understood. In any plan for raising fresh capital or any scheme of reconstruction, should such be found advisable, the interests of the shareholders would be necessarily subordinated to those of the debenture holders. It was quite clear that in any such scheme they would be able to do far better for the preference shareholders' interests if they were a going concern than if their concern was already taken over by the debenture holders. That was the risk which their proposal is designed to meet, while the committee, who refused to support that proposal, had absolutely no counter pro-

posal to offer as an alternative on this financial point. They appeared determined to commit suicide, as far as he could judge. The financial position had been placed before them; they had pointed out the urgency of the case; they had asked them: how else could the necessary sum be raised? And their only answer was by talking to us about seats on the board! If four archangels were on the board they would not help them at the moment, unless they came with funds in their hands. He asked them, as men of business, to look the matter fairly in the face, and form their judgment for themselves. The resolution proposed by the board provided an escape from a pressing danger, and offered them a chance of sharing in any recovery that the future of the company might bring. If it were rejected the responsibility for its rejection would rest on the minority and on the committee who advised that course, for the board could take no responsibility for the consequences that would follow a decision which, in their view, would gravely endanger the existence of the company. He then moved the following resolution:—"That the board be, and it hereby is, empowered to apply from the investments of the preference shareholders' reserve fund any sum required, not exceeding £52,500, to the redemption of first debentures on or before January 1st, 1908." That is the resolution which I move, and I will remind you that we propose that 6 per cent. interest shall attach to the advance, and that any sums so borrowed will have a first claim for repayment in priority of any distribution on the ordinary shares.

Mr. F. M. OGILVY seconded the motion.

Mr. L. LEVER, M.P., said that, as one chosen to meet the directors, he was sorry to say that the committee had not been able to effect any settlement whatever, and he did not think the fault or the responsibility for that rested with the committee. The directors had practically nothing more to offer than that which they offered at the last meeting. It was true that they placed before them the financial position of the company, and on the whole he was inclined to say that it was less favourable than he anticipated, and if they were to grant the directors the £52,500 this year there could be no doubt whatsoever that next year they would have to come to the preference shareholders again for a like sum. It was not only in London that the situation was pressing, for the same condition of things prevailed at Baku itself, and even if they were to grant that sum of £52,500, it was highly problematical whether the company would exist for more than another year at the longest unless they came to the rescue. The chairman had spoken of their demand to have four directors upon the board. He thought it would be within the recollection of all present that their sole object was to impress upon the meeting and upon the directors that they wished for a committee of investigation, a committee for which those who served on it would receive nothing, but would investigate the position of affairs and report to the shareholders. That was absolutely refused, and they were given to understand that if they pressed for it the directors would stubbornly refuse it and go to a poll. They knew, if they went to a poll, that with the large block of ordinary shares which the board controlled, including the Dutch vote of £300,000, they would be defeated. They therefore withdrew their resolution, and they said if they would not give them a committee of investigation they must have some seats on the board of directors. He thought the directors had dealt with the committee ungenerously and, he might say, unfairly. They had asked, in the first instance, for four seats on the board, in consequence of the directors having refused them at the committee of investigation. He would at once say that his committee were perfectly prepared to accept a committee of investigation; that was all they wanted. They wanted a committee of investigation so that they might ascertain the true and absolute facts and the real position of the company. The committee asked, if the committee of investigation was refused, that they should have four directors on the board, so that they might have some influence in the management. If they were to accept two seats they would have no influence at all with the board. If the matter fell through, the responsibility would not attach to the preference shareholders, but to the directors of the company, because, on the one hand, they were obdurate and stubborn with regard to the position they were taking up, and the opposition were certainly entitled to be equally obdurate on that point, seeing that they were asked to give up a large sum of money when the ordinary shareholders were not going to give up anything whatever.

Mr. ELLIOTT PEARSON said the chairman had asked the preference shareholders in his speech to look at the matter fairly and squarely in the face. That was exactly what the executive committee, of which he was a member, had been doing for the past five months. The position was that they were all partners in a large oil business which was losing over £100,000 a year at the present time—a loss which had been made in spite of the fact that the price of oil to-day and during the past year's working had been from two and a-half to three times as high as the price obtained during the first six years in the history of the company, when they earned big profits and paid large dividends. If they lost over £100,000 per annum with oil at boom prices, what were they likely to lose when it reverted to normal prices? So long as they were content to continue the present policy of management, and went on trading at a loss, no sums of money whatever would help them one jot. The loss was due to one of two causes—either the property had lost its value or the management was wrong. If they did not change the management there was no doubt they would be in the bankruptcy court in a very short time. The committee strongly recommended that an independent oil expert should be sent out, so that they might ascertain where mistakes had been made in the local management. If the property were a payable one, as he honestly believed it was, what they wanted to find out was why it did not pay.

Mr. SHAW KENNEDY said that the chairman stated at the last meeting, and on the present occasion, that the board, on the vote of confidence, had the support of over 500,000 shares. Well, 310,000 were held by the Dutch, having been put into a trust or financial company. The shareholders in Holland had, in the carrying out of that arrangement, given up their voting power, and had been given shares to bearer. The financial company, therefore, which had the vote on those 310,000 shares did not own a single share; so that, as a matter of fact, the shareholders in Holland had not voted on the vote of confidence in the directors at all. If they had voted the result would have been very different. He and Mr. Burke went out to Holland, and there found a great deal of discontent existing.

Mr. LUDEN said it was quite natural that the position regarding the Dutch shareholders should be misunderstood. In Holland people did not like dealing in shares other than in the way of bearer certificates. When, therefore, foreign companies wished to place their shares on the Dutch market, it was necessary to go to what was called an administration office, which was equivalent to a trustee company in London. As a result of that procedure, the Dutch parties interested in that company asked him some five or six months ago to accept a seat on the board, so as to look after their interests. He was welcomed by the directors, and had since then done his best in the interests of the company. He did not know how many shareholders Mr. Shaw Kennedy met when he was in Holland, but he (the speaker) himself had seen letters which had been written by dissatisfied shareholders there; but the dissatisfaction expressed in them was of a purely platonic character, and if the shareholders themselves had been asked by the so-called committee for the smallest financial assistance he did not think a third of those letters would have been written. As a matter of fact, the Dutch vote at the last meeting was recorded by one of the directors of the trust company, and even admitting that these platonically dissatisfied shareholders were of very great importance, they only accounted for £75,000 out of the £300,000. Deducting this figure from the vote recorded at the last meeting in favour of the board, there was still a very respectable majority in their favour.

Mr. W. H. BURKE said the fact remained that the Dutch shareholders held 310,000 shares, and he believed that if they commenced a movement in Holland such as had been commenced in England there would be no difficulty in getting a large majority of those shareholders to side with the movement in England. The proxies lodged in favour of the committee on the last occasion amounted to only 176,000, but he wished to point out that a mistake was made in the proxy form, as a result of which they were some 20,000 short of those which they would otherwise have had. Thus they would have had very nearly 200,000, as against the board's 530,000.

Mr. Burke said that if they deducted the 300,000 from the 500,000, there would be very nearly a majority against the board among the English shareholders. Mr. Burke then proceeded to refer to one of the speeches made by the chairman last year, when he spoke of a weekly production of 300,000 poods being anticipated. That was on all-fours with his previous optimistic statement. At the same meeting also the chairman had stated that they had only to wait a little longer to see an improved position. Instead of that, however, they now found that the average weekly pro-

duction was only 180,000 poods, and not 300,000 poods, as they had been led to anticipate.

One of the company's directors had been to Baku, and when he returned he told them that their property was one of the most valuable oil properties in the world, and yet with all that valuable property they made a loss of £174,000 upon their last year's working. Why should the preference shareholders be called upon to sacrifice any more money? Could not the board—those gentlemen of eminence and experience in City life—find someone among their friends who would find the money so that the company could be lifted out of its present difficulties? Their directors had received very large sums for what they had done. In 1898, which was a very profitable year, the directors' fees were £14,150, and the next year they were £8,981, while in 1900 they came up to £15,000. In 1901 they came down to £8,473, and eventually they accepted £5,000; while for 1906, when all their profits had gone and they worked at a great loss, the directors were graciously pleased to take £4,000. Therefore they had received an average amount per annum of £8,175, and so he put it to the directors that they ought to make the most herculean efforts possible to save the company rather than come to the preference shareholders and ask them to give up a part of the fund, the existence of which had led many of the preference shareholders to acquire their holdings. He thought that if the preference shareholders were given the four seats which were asked for, the gentlemen elected might bring fresh ideas to the business, and, untrammelled by the difficulties of the past, might save the company, and bring it back once again to that state which the chairman, in one of his speeches, had characterised as the bumper times of years gone by.

After the CHAIRMAN had replied, the voting took place, the Chairman announcing the resolution carried, the voting being 27 for and 9 against.

Mr. BURKE asked for a poll, which was taken then and continued the following day at the company's office. The result of this was the complete defeat of the board's resolutions, as announced in our editorial columns.

TENDERS OPEN.

The Commercial Intelligence Branch of the Board of Trade has been notified by the Acting British Consul at Rouen that on the 18th December tenders will be opened at the Préfecture of Rouen (Department of the Seine Inférieure) for the supply of goods required for the use of the port of Dieppe services. These include—20,600 kilos. of oil, grease, tallow and petroleum, the maximum price of which is placed at 10,547.50 francs (about £422). For further particulars, application should be made to the Préfecture at Rouen.

The Commercial Intelligence Branch of the Board of Trade has also received from His Majesty's Consul-General at Berlin copies of the form of tender and ordinary and special conditions of contract relating to the supply to the Prussian State Railway Directorates of 7,765,000 kilos. of petroleum, divided into the following lots for delivery to the various district directorates:—1,400,000 kilos. for Berlin; 1,500,000 kilos. for Halle-on-Saale; 765,000 kilos. for Bromberg; 950,000 kilos. for Dantzig; 800,000 kilos. for Königsberg (Prussia); 1,350,000 kilos. for Magdeburg; and 1,000,000 kilos. for Stettin. Sealed tenders, inscribed "Angebot auf Petroleum," must be delivered to the Rechnungsbureau, 1-4, Schoeneberger Ufer, Berlin, W., 35, not later than 11 a.m. on the 13th inst., and samples of the kind designated in the conditions of contract are to be forwarded to the Rechnungsbureau (Materialabtheilung), No. 5, Flottwell Strasse, Berlin, W., not later than 10th inst. Copies of the forms of tender may be seen at the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall Street, London, E.C.

OIL FUEL IN THE NAVY.

The Admiralty direct that the following precautions are to be observed before any compartment which has contained oil fuel is entered—1. The compartments to be opened are to be cleared of oil as far as practicable by the pumps, and then pumped dry by the hand residue pumps. 2. To expel any foul air or gases and to assist in clearing out the residue. The compartments are then to be filled with sea-water from the fire main through the oil-filling pipes. It is necessary to make certain that the compartments are quite full by observing the head of water at the funnel break in the filling pipe. Water must be run in until the level remains constant at the funnel break. This operation may be repeated if considered necessary. 3. The compartments are then to be pumped out as dry as possible. 4. Only safety lamps or portable electric incandescent lamps are to be used in the oil-fuel compartments until the exposed surfaces have been thoroughly cleared of oil. In addition, the precautions observed with men working in double-bottoms, except as modified above, are to be strictly observed.

1081.—The following precautions are to be observed while men are engaged in cleaning and coating the double-bottoms of a steel ship, and in every other confined space in which men have to enter:—(a) When opening up a confined space, no naked light is to be used inside the space or within 20 feet of the opening until it has been ascertained by means of a safety lamp that it does not contain explosive gases. (b) The air fan with hose is to be freely used for pumping in fresh air before the men are sent down and while they are at work. (c) A chief or leading stoker is to be responsible under the engineer officer in charge of the party that no man enters a compartment until a lighted candle has been placed inside it, and has been found to burn clearly and steadily for at least five minutes. (d) Still greater caution is required when the compartment has only one exit. (e) Communication is always to be kept up between the men in the inner compartment and those who have access to the outer air. (f) The men are to be warned that they should leave a compartment immediately the lights begin to burn dimly; candles only are to be used by the party, as a surer test than lamps, since it might be thought that lamps burnt dimly for want of trimming. (g) Every man working in confined spaces should be especially cautioned as to the danger of taking bogies or burning fuel in such places. The same precautions are to be strictly attended to in the case of boilers or bunkers. Special care has to be taken that every man in the ship is made acquainted with these precautions.

The ocean-going destroyer "Mohawk," which has been built by Messrs. White, of Cowes, for the Royal Navy, has run her official trials on the Maplin Sands, and is officially stated to have attained the speed of 33.4 knots, or approximately 40 land miles, per hour. This is the fastest speed ever attained by a destroyer under modern service trial conditions, which are exceedingly severe. The "Mohawk" is remarkable in that she uses only oil fuel and carries no coal. She is fitted with turbine engines of 14,500 horse-power.

THE FERGHANA OIL FIELD.

It is reported that Mr. Kovalevsky, managing director of the Tchimion Co., who has secured a concession for the construction of a railway from Namangan to Kokand, a distance of 70 versts, will start work upon it in the coming spring. He also intends starting drilling on plots adjoining those of the Tchimion Co. Rumours couple with the Kovalevsky concern Prince Khilkoff's concession on the Government petroliferous lands at Maili-Sai, but this, however, lacks confirmation. Prince Khilkoff intends visiting his concession shortly, and will commence work in the spring. In spite of the onerous terms of the contract with the Government, the commencement of boring by Prince Khilkoff is expected to give an impetus to the development of activity on adjoining lands, which are not burdened by any obligations.

At present the Tchimion Co. still remains the only petroleum-producing firm in the Ferghana province. This company operates on two concessions, situated at a distance of 22 versts from Vannorskaia station, where a large petroleum refinery has been erected and to which the crude oil is delivered by means of a 4-inch pipe line.

At the oil field, two new wells are now being laid down, Nos. 17 and 18, whilst 10 boreholes are in exploitation; three wells are being deepened. Trial drilling is now in progress at a distance of two versts from the present producing area.

At the refinery there is now 200,000 poods of kerosene and 30,000 poods of benzine distillate. The residuals, which contain paraffin, are sold under contract to the Central Asian Railway. The production of crude oil amounts to 10,000 poods per 24 hours.

On the same range of hills where the Tchimion Co. is operating there are also concentrated the prospecting operations of other firms. Among these are:—The Rishtan Co., the Batoum Co., the Turkestan Co., the Central Asian Co., and V. Alekseeff. The deepest well is 1,260 feet, and has not yet struck any oil, which is the case also with all the other wells. The affairs of most of these concerns are suffering from want of capital and wrong finance, and from the fact of having been started without preliminary investigation. The petroliferous nature of the ground is far from proved. Most of these firms intend to continue operations, whilst some propose to start new wells. These concerns are at a considerable distance from the railway, and therefore have to bear a heavy cost of transport for materials.

BATOUM PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended November 11th, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1906.	1907.	1906.	1907.
To Europe ..	—	—	12,000	280,000
To the East ..	128,000	295,000	—	3,000
To Russian Ports.	—	4,000	6,000	4,000
From 1st Jan. to 11th Nov.:—				
To Europe ..	10,259,000	12,916,000	7,119,000	8,983,000
To the East ..	6,378,000	10,632,000	56,000	332,000
To Russian Ports	2,604,000	1,803,000	240,000	173,000

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£1 18s. 6d. xd
Do. 6% Cum. Pref. ..	£100,000	£10	£11 18s 9d. xd
Burmah Oil, Ord.	£1,100,000	£1	£3 4s. 3d.
Do. Pref.	£250,000	£1	£1 4s 9d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	£6 15s. od.
Do. 5% Pref	£18,900	£7	£4 13s od.
Oakbank Oil Co., Ltd., Ord. (17s. paid)	£170,000	£1	£1 15s. od.
Pumpherstons Min. Oil Co., Ltd., Ord. (17s. paid)	£110,500	17s.	£13 os. od.
Do. 6% Cum. Pref.	£100,000	£10	£13 os. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 18s. 6d.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 12s. 6d.
Do. "B" Deb...	£150,000	£100	£165.

Company.	Latest Quotations (per cent.)	Florins.
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Arnhemsche Petroleum Mij.	—	1,000
Aurora " " (Deb. 5%)	—	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.)	124 $\frac{1}{2}$	50
" " " (Deb. 4 $\frac{1}{2}$ %)	100	1,000
Gaboës " " "	—	—
Holl. Rumeensche Petroleum Mij.	16 $\frac{1}{2}$	1,000
Int. Rum. Pet. Mij.	80 $\frac{3}{4}$	500
Java Petroleum Mij. (Ord.)	—	1,000
" " " (Pref.)	14 $\frac{7}{8}$	—
Koninklyke Nederl. Pet. Mij. Shares	248 $\frac{1}{2}$	250-1,00
" " " Share certificates	246 $\frac{1}{4}$	1,000
Mœara Enim Petroleum Mij.	121	100
" " " 1-1,000 Oblig. 5	—	250-1,000
" Moesi Ilir " Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij.	5	—
Nieuwe Ned. Petroleum Mij. And.	—	1,000
Oliebronnen in Hannover Mij.	45	—
" " " (Deb. 5 %)	—	—
Panolan Maatschappij Cert.	—	—
Perlak Petrol. Mij. (6% cum. pr. A.)	110	1,000
" " " (Common)	—	—
Sumatra-Palembang Petroleum Mij.	81 $\frac{1}{2}$	500
Tarakan Petrol Mij.	—	—
Zuid Perlak Petrol. Mij. (Pref.)	78 $\frac{3}{4}$	—

Established 1809.



SPECIALITIES:—

Patents—Nos. 6905 and 9671.

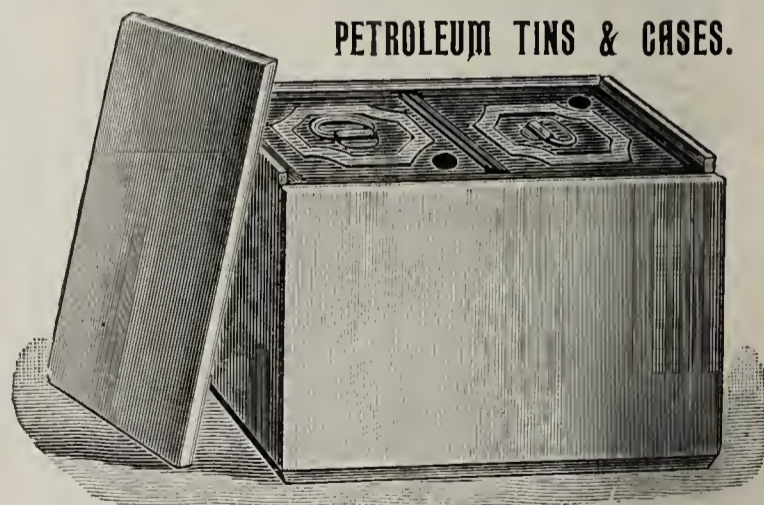
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SATURDAY, DECEMBER 7, 1907.

Upon every hand, therefore, to-day the advantages attendant upon the use of oil fuel are recognised, and

it is no surprise to find that that most conservative of governmental departments—the Admiralty—has cast its voice strongly in favour not for the use of liquid fuel as an auxiliary power upon war craft, but in every case displacing coal wherever possible. To-day, most of the vessels which are being constructed for the British Navy are built according to specifications for the use of liquid fuel, while in all future torpedo boats and destroyers, oil fuel alone is to be used.

But what this decision means has yet, by the majority of people, to be fully grasped. The fillip that is thereby given to the petroleum industry in almost every part of the world cannot possibly be over-estimated, while the benefit the allied industries will reap is bound to be most substantial. The erection of bulk storages round our home shores has already been commenced, but the full list of depôts, at which large supplies of liquid fuel are to be maintained for Admiralty purposes, has not so far been decided. At the present time, however, it is known that in addition to the large storage installations which are erected along the South Coast, and those now under consideration for the Medway, South Shields, Hull, Granton, Barrow, Birkenhead, Belfast, Haulbowline and other ports are to rank as centres for the bulk storage of fuel supplies. But this is not all. Orders are about to be placed for the construction of a large number of barges which will be stationed near the centres of bulk storage, and in this way, too, many branches of commerce will substantially be benefited.

That the general adoption of liquid fuel upon Admiralty boats is the forerunner to a great advance in other directions is almost beyond the question of doubt. Though steamers of 14,000 tons displacement have regularly and successfully made voyages the whole distance from Singapore to the United Kingdom, round the Cape of Good Hope, and vessels of even greater displacement have made equally successful voyages from New York to San Francisco, around Cape Horn, under the system of high and low pressure hot air, liquid fuel has not so far taken great hold of the "merchant-men" of the sea. The long voyages that have for the past several years, however, been made shew the practical solution of the problem of the use of oil fuel for ship propulsion, and so in this respect considerable progress is certain to take place in the not distant future.

Our "greyhounds of the Atlantic," we know, have not gone over from coal to liquid fuel, yet we are assured by some of the officials of the companies controlling our Atlantic mail boats that the subject has received, and is still commanding, the most serious attention on the part of the responsible heads of the engineering departments. While upon this subject, a reference to the interesting letter from J. J. Kermode, which appears elsewhere in this issue, is very *apropos*. Mr. Kermode looks at the matter from a practical standpoint, and clearly shews what immense advantages would attend its adoption. In fact, economy would be found in almost every direction. Considerably less space would be required for storage, approximately a day could be comfortably taken off each journey to America, while that large army

of stokers which is to-day an essential part of the complement of our liners would be swept away, their places taken by a few intelligent men, whose labours would be comparatively light. It is not our intention here to go into the merits of liquid fuel when compared with coal, for upon many occasions have we published most convincing articles upon that phase of the question: suffice it to say that even if the economy in this direction were the main attendant advantage of oil fuel, its almost universal adoption, both on sea and land, is only a question of time.

But what concerns us more directly is the effect which the advance of liquid fuel which is now taking place will have upon the petroleum industry. There can be no two opinions upon this point: the effect is bound to be that a most beneficial impetus will be given to the industry in almost every part of the world. The heavy fuel oils, which are in such abundance in the American, Californian, and other fields, will immediately assume an importance which has all along been desired to stimulate development; while in other regions, where to-day exploitation is being carried on in a somewhat spasmodic fashion, this will give place to a systematic and energetic search, which in its turn will necessitate the infusion of additional capital, to be used for the acquisition of territory, the purchase of the requisite machinery, drilling tools, etc. The present methods of transportation will perforce have to be extended; and, by reason of the greater demand for oil fuel, the whole petroleum industry will be lifted to a position of far greater importance than that which it occupies to-day. The general adoption of liquid fuel will, as we have said, give the petroleum industry throughout the world an impetus, the effect of which should prove to be permanently beneficial.

THE PETROLEUM DEPOSITS ON THE ISLAND OF TIMOR.

We have been officially asked to draw attention to the conditions under which the contract will be granted for the concession of Pualaca's petroleum deposit in the Island of Timor. The contract will take place on January 30th next. The various contractors must present a certificate shewing that they will have a provisional deposit of 2,000,000 reis. The concession will be granted for an unlimited time, provided the contractor fulfils the conditions imposed upon him by the laws of the deed drawn up. The contractor shall have the exclusive right to explore petroleum and any bituminous matters found in the area of the concession, and he shall be also allowed to import free of custom duties, machinery and utensils necessary for the exploitation of the deposits. He shall also have exemption from port, lighthouse, or piloting taxes upon his ships for the transport of the petroleum and its products, and he shall also have the assistance of the administrative authorities in the engaging of the necessary workmen, while the State is to undertake to establish a despatching office on a spot of the sea-coast of Timor, chosen by the contractor, for the purpose of shipping the products of the concession.

The full programme of the contract may be inspected at the offices of this Journal, 45, St. Mary Axe, E.C.

The Future of Petroleum as a Raw Material for the Chemical Industries.

By Dr. R. WISCHIN.*

Although the petroleum industry during the last fifty years can be classed among the great industries, it is nevertheless, from the chemical point of view, still in an empiric stage, for at present we have not yet succeeded in obtaining certain products of manufacture by the chemical transformation of crude oil.

The cause of this phenomenon is to be found in the fact that the petroleum industry has been naturally occupied from the beginning in producing as large a quantity as possible of illuminating material, and it is only lately that attention was directed to the production of materials for combustion, such as benzine, mineral oils, paraffin, vaseline, etc., so that it was sought to manufacture, at the smallest cost, large quantities of these easily marketable articles. In consequence of this pre-occupation, interest in the production of products of greater commercial value by the chemical transformation of petroleum naturally remained in the background.

At the same time, it is probable that this raw material which is found in such abundant quantities has not escaped the attention of chemists, and, in fact, several of them occupied themselves with the chemical investigation of crude petroleum. But these investigations have yielded results which were but little encouraging, as it has been established that crude petroleum consists to a large extent of aliphatic hydrocarbons, and it was already known in those times what great resistance these bodies offered to chemical reactions. There was therefore little possibility of utilising them as a transformation material for the manufacture of chemical products.

On the other hand, the chemical industry has found in coal tar an excellent raw material, which admits of so many applications, that the interest of chemists in petroleum has entirely disappeared. It was only when the chemical investigations of the petroleum from the Apscheron Peninsula demonstrated that this oil consisted largely of hydrocarbons but little known previously, and which could be considered as hydrated benzoles, and which have later received the name of "naphtenes," that the interest in the chemistry of petroleum received a fresh impetus, and we have to record a series of numerous and valuable works on the chemistry of these interesting bodies, for which we are indebted chiefly to Russian chemists.

As regards their chemical character, the naphtenes represent a transition between the aliphatic and aromatic hydrocarbons, and for this reason they have to be considered as superior to the aliphatic hydrocarbons in regard to their capacity for reaction.

It is an established fact that, as regards certain chemical reactions, these bodies are so sensitive that we can make use of them for manufacturing purposes.

We have experimented with the capacity for chemical reaction of Baku crude oil in the presence of all reagents, and we have found that it is possible to obtain, in fact, a

whole series of chemical transformations which could be utilised for industrial purposes, and by means of which we could arrive at a series of very valuable chemical products. It would certainly take too long to give here a detailed report on the results of my labours. I will limit myself by simply referring to certain characteristic moments, with the object of shewing that there is real ground for hoping that petroleum could, in the not far-distant future, be employed as a raw material for the manufacture of chemical products.

The object of these words is in particular to arouse the interest of chemists in this very important question, and to facilitate the matter for those who may wish to occupy themselves with this difficult, but remunerative, problem, I will publish soon the results of my three years' investigations. As regards the treatment of petroleum in a chemical way, we must consider as the raw material, first of all, the hydrocarbons, and after that the residuals obtained in the petroleum refineries.

These latter should, as regards the lyes left, have to be decomposed, first of all, by means of mineral acids, and the organic acids separated should be further treated.

In the one and the other case, the chemical treatment should be preceded by a fractional distillation with the aid of effective dephlegmators; and as regards the petroleum acids, the distillation must be carried on in vacuum.

The first chemical attack should be: for the hydrocarbons, introduction of halogen into the molecule, a reaction which is easily effected. Chlorine can be fixed in the naphtenes with a quantitative yield, when the hydrocarbons having been placed in contact with water, a stream of chlorine is introduced. In this way can be easily obtained mono- di- and polychlorides; the chlorine enters only into the central molecules, and never into the lateral chains. When the reaction is carried out by means of bromide the reverse takes place. It scarcely shews any action on hydrocarbons in diffused light, while in daylight it acts energetically on the lateral chains, and we obtain a quantitative yield of bromide naphtenes. But I have never succeeded in substituting more than one atom of bromide, for each time when I wished to push the bromuration further there always resulted a monobromide with the rest of bromide transforming itself into bromhydric acid. This phenomenon is very interesting, and could be utilised for an industrial purpose.

Whilst for the hydrocarbons only halogenisation is employed as the first chemical reaction, for the organic acids of the lyes of the residues different methods can be employed:—(1) By the action of pentachloride of phosphorous or, better still, of trichloride of phosphorous on the organic acid of the lyes, we obtain directly chlorides of acids. These are all oily liquids which can be distilled without being decomposed. From

* A Paper read at the Third International Petroleum Congress.

these chlorides are formed amide acids when they are poured into a solution of 20 per cent. of ammonia, and left there for a time; or the amides are obtained direct from the acids by heating with rhodanamon, or, lastly, by saturating the free acids with ammonia and heating under pressure in an autoclave, the ammonia salts formed. All these systems lead to the desired end, and amide acids are obtained, which can be crystallised, and which can be obtained in a pure state of boiling water or benzol, or better still, by a mixture of benzol and acetone.

(2) The chlorine or bromine are made to act directly on the acids, and there are obtained halogenised acids, in which halogen seems to occupy the position *a*.

(3) The calcium or baryte salts of the acids are distilled, which results in ketones; if these salts are mixed with salts of aliphatic acids, such as, for instance, acetate of calcium, mixed ketones are then obtained. We have prepared many of these ketones, and we always obtained them in sufficient quantity, especially when we treated in a current of dioxide of carbon and in a vacuum.

(4) Ethers of naphtenic acids are prepared by treating a mixture of acid and alcohol corresponding to gaseous chlorhydric acid or to concentrated sulphuric acid. However, the manipulation of these ethers is very inconvenient, for whilst in a concentrated state they have a pleasant odour of fruit ethers, when diluted, just about the point where they have to be worked, they have a very unpleasant odour, and cause headaches and indispositions. The chemical transformations above enumerated should be preceded by the chemical treatment of the commercial products, and there could then be obtained approximately the following products:—

(1) Terpenic hydrocarbons, namely, those of certain technical fractions, for replacing nature terpene oil, and special terpenes from pure hydrocarbons, for the manufacture of synthetic smelling materials and perfumery.

(2) Aromatic hydrocarbons, the manufacture of which would only be practicable in the case of rare and dear products.

(3) Hydrated anilines, which could be utilised for the manufacture of colours. It is probable that this result can be obtained, as lately several chemists have proved the existence of a chromophore character of hydrated combinations.

(4) Seccative oils and varnishes from solar oils, in the same manner as turpentine substitutes from the light fractions.

(5) Organic acids for the manufacture of soap.

(6) Tryglycerides from naphtenic acids, as substitutes for vegetable and animal oils and greases.

(7) Crude mixtures of ketones from petroleum acids, which could find use as articles for impregnation or denaturation.

(To be concluded.)

A New Operating Company.—A company has been formed in St. Petersburg under the title of the Caspian-Romany Petroleum Co., which has purchased a number of gas and oil bearing plots in the localities of Surakhany, Ramany, Hausan and Zyk, all in the neighbourhood of Baku. The company propose to produce natural gas by means of boreholes, and carry it in a pipe line, 12 versts long, to the oil fields, where it is to be used as fuel.

GALICIAN PETROLEUM PRODUCTION.

SEPTEMBER STATISTICS.

The following are the official figures of the production and stocks of crude oil at the Galician oil fields in September:—

	Production in Sep. Tons.	Stocks on Sep. 30th. Tons.
East Galician Fields—		
Boryslaw-Tustanowice	105,920	522,109
Schodnica	3,350	9,951
Urycz	1,100	4,329
Mraznica	100	449
Other East Galician Fields ..	960	1,262
West Galicia—		
Potok	1,120	1,477
Rogi	780	829
Rowne	200	430
Tarnawa-Wielopole-Zagorz ..	1,150	4,751
Krosno	2,500	11,951
Other West Galician Fields ..	1,900	5,419
Total	119,080	562,957

The total production of crude oil in Galicia during the first nine months of 1907 amounted to 830,894 tons, against 561,945 tons in the corresponding period of 1906. The production of the various fields during the nine months was as under:—

	Nine Months, 1907.	Nine Months, 1906.
East Galicia—		
Boryslaw-Tustanowice	705,690	408,695
Schodnica	30,450	37,181
Urycz	10,290	11,453
Mraznica	1,100	1,230
Other East Galician Fields ..	9,300	9,050
West Galicia—		
Potok	10,760	12,397
Rogi	6,783	10,799
Rowne	1,421	1,121
Tarnawa-Wielopole-Zagorz ..	11,550	19,220
Krosno	22,260	26,243
Other West Galician Fields ..	18,290	24,556
Total	830,894	561,945

This abundant production has caused a crisis in the Galician petroleum industry, of which nobody can yet see the end. The Government has done its best to assist the petroleum industry by authorising the Galician Provincial Bank to advance considerable sums for the construction of storage tanks, where the surplus production could be stored.

JAPANESE NOTES.

A wild cat well which Mr. Nagino, a Japanese contractor, has been drilling in a prospective oil field in Hoo-Nang province, China, for the Government of the same country, is reported to have been recently brought in, demonstrating the existence of oil in the place. The well is said to have spouted 24 barrels of oil, having a gravity of 37.5° B., together with large quantities of water.

The first shipment of the California crude arrived at Yokohama on October 17th per the tanker steamship "Pinna." The cargo was composed of 45,000 barrels of oil and delivered to the Namboku Oil Co., in which the Oriental Steamship Co. is largely interested, to be refined in its refinery at Hodogaya, near Yokohama.

The geological survey of the oil fields in Echigo, being conducted by the Imperial Geological Commission since 1900, is now nearing its completion. The Government is now contemplating the extension of the survey to fields in other provinces.

The September production of the Niitsu field, Echigo, was 80,950 koku, of which 31,858 were produced by the Hoden Oil Co. and 24,934 by the Nippon Oil Co.

THE ANGLO-CALIFORNIAN OIL SYNDICATE, LTD.

FIRST ANNUAL MEETING OF SHAREHOLDERS.

The first annual meeting of the shareholders of the Anglo-Californian Oil Syndicate, Ltd., was held on Tuesday afternoon at Winchester House, E.C., the chairman of the company—Mr. MAGNUS MOWAT—presiding over a large attendance of shareholders.

The directors, in their report, stated that on August 7th, 1906, they obtained possession of the estate, consisting of a block of about 1,500 acres, selected in accordance with the deed of purchase referred to in the prospectus, and the transfer had the approval of the company's solicitors, both in London and in California. An unavoidable delay in completing arose through the earthquake in San Francisco during the first half of last year.

Upon obtaining possession, no time was lost in procuring the necessary machinery for well sinking, which enabled the first well to be begun on October 1st, 1906, on the site selected by Sir Boverton Redwood. A depth of 1,630 feet has now been reached. Whilst the progress in drilling, owing to physical difficulties, had been slower than was originally anticipated, the board were satisfied with the amount of development accomplished. At the depths of 1,060 feet and 1,305 feet respectively samples of the strata (taken from the drilling bit) shewed on analysis over 19 per cent. of free oil, which was an excellent indication. Well No. 2 was commenced on July 9th, 1907, and had reached a depth of 810 feet, the indications throughout having been of a continuously favourable character.

The CHAIRMAN, in moving the adoption of the report, said it contained a summary of the work they had done up to the date of its issue—November 23rd last—but he desired to supplement the same by giving later information regarding the property. This was contained in a telegram from Lompoc, in which district their wells were situated. The telegram read: "Well No. 1: 1,650 feet, considerable amount of gas shewing. Well No. 2, 850 feet, bituminous odour."

In addition to the above, their technical adviser—Sir Boverton Redwood—had received an important letter, dated November 8th last, from his associate—Mr. Arthur W. Eastlake—who had just visited the Lompoc district, and after going over the log of well No. 1. considered that the difficulties which had been encountered from time to time were more or less to be expected, and did not require any special comment. Their superintendent and drillers were all capable and experienced men and had done everything possible to cope with the difficulties they had had to contend with.

The recurrence of the brown shale in well No. 2 was satisfactory, as it was of a similar character to that found on the Purisima anticlinal, where very productive wells had been struck.

From the balance sheet, which covered a period of twenty-two months, the shareholders would note that the capital account stood at £50,000, out of which the company had called up in round figures a sum of £39,800, leaving over £10,000 available for further operations. The calls in arrear had been reduced to a nominal figure. The property, including the cost of transfer, stood at £17,481.

There had been, he was pleased to say, a considerable advance in oil-bearing properties since they secured their 1,500 acres. £2,454 had been spent in plant, machinery, buildings, and other articles; £9,672 was represented by £4,961 spent upon well No. 1 and £3,065 upon well No. 2, and £1,645 would be apportioned between the two wells in later accounts. The company's outlay on the wells consisted of wages, cost of lumber, and other items, as well as payments chiefly for casing, those amounting to £4,390. Not knowing the depth to which they might have to bore, the local committee had provided some 3,000 feet of casing for each well. Out of their cash balance of £2,729 they had remitted £2,000 to Lompoc in order to meet the outlay there.

Judging from the indications of oil on their property, and reviewing the situation as a whole, the prospects, notwithstanding the somewhat slow progress, were distinctly encouraging.

From a commercial point of view, the future of oil fuel was assured. The output in California in 1905 was 35,000,000 barrels and in 1906 it fell to 30,000,000 barrels, and that figure would possibly not be reached this year. On the other hand, consumption had increased, and was likely to go on increasing. The economic situation in California was satisfactory—the industry having got into strong hands.

He then moved the adoption of the report and balance sheet.

Mr. JOHN CHAPMAN, in seconding, said the record of the syndicate was satisfactory, especially from the point of view that they had

had no accident of any nature, and practically no serious delays. The time he knew had appeared long to some of them, but he had the best reason for stating that they could not have gone on faster than they had done.

Sir BOVERTON REDWOOD then addressed the shareholders. He said it was a matter for congratulation that the only possible ground of complaint could be that the work in which they were engaged had proceeded less rapidly than was anticipated, and certainly less rapidly than the shareholders desired.

The delay, in point of fact, which had occurred in the completion of the two wells had been clearly shewn to be due to the character of the strata which they had been engaged in perforating. They had met with some exceptionally hard formations, and in drilling with the usual percussion drill in hard formations such as they had to contend with, it was not that one had merely to do a considerable amount of pounding with the drill in order to reduce the hard rock to a condition in which it could be extracted from the borehole, and brought to the surface by means of the sand pump, but the action of the drilling tools against the walls of the well had the effect when hard strata was encountered of very quickly wearing away the side of the edge of the bit. Consequently, besides blunting what they might call the chisel edge owing to its impact as it rose and fell upon the rock, they had the wearing away of the sides of the bit, which produced a considerable decrease in its width. As, therefore, the diameter of the borehole depends upon the width of the drilling tool, and as they could not lower their casing unless they maintained the diameter of their borehole, it naturally followed that in working in such circumstances they had frequently to bring the drilling tool to the surface and forge out the bit to its original width. That was the reason why such drilling was necessarily very slow. But, after all, it was better to be slow and sure than risk the successful completion of a borehole by undue haste, and he thought it reflected great credit upon their staff that they had had very few accidents which had necessitated any lengthy stoppage of the work. All the accidents which had occurred had been little mishaps incidental to drilling operations, and those had been comparatively few in number. One matter had been and was still receiving the very careful consideration of the board, and that was the shutting off of the water from the borehole.

As a final word, he desired to say that the whole indications which had been met with, including those furnished by the samples of the strata which he had submitted to careful examination, were of the most hopeful and satisfactory character. They, in his judgment, fully justified what he understood to be the unanimous view taken by those who were acquainted with the circumstances of the case—that they had every reason to expect to get oil in both those wells. They had already found gas, which was the forerunner to oil, in considerable quantities, especially in borehole No. 1, and they had also met with some oil. All they had to do was to be patient and confident in view of the circumstance that no discouraging feature whatever, so far as he was aware, had yet come before them.

Mr. WM. SHYVERS said that, as representing the views of the Californian shareholders, and more especially in view of his having resided in California for a number of years, he desired to make a few remarks of a retrospective nature. When their company was formed the development in the neighbourhood was entirely north and east of them. No development work whatever had taken place south, and he thought the nearest producing wells in that direction were at Summerland, which was some considerable distance away. But since their company was formed, developments had been begun south of them—in fact, six miles south-west of their operations they had the Bear Creek Oil Co. operating—a company, which now having got down to a depth of 1,400 feet, were highly delighted with their prospects.

Then at the time of the negotiations for their company to commence drilling, they were the pioneers in the district of Santa Maria and Lompoc as regarded British capital. No British or Anglo-Californian company was operating in the neighbourhood. But now they found there were several British companies who had invested large sums of money in the neighbourhood for refining, development work, and the purchase of prospective oil lands. First, there was the Californian Refineries, Ltd., and then the Santa Barbara (Cal.) Oil Co., Ltd., both of which consisted of Anglo-Californian capital. The latter company was now drilling two wells, with every prospect, so he believed, of ultimate success.

Then they found the promoters of that highly successful company, the Californian Oilfields, Ltd., had also come into the neighbourhood and had purchased the Underhill ranch, Los Alamos—in fact, he thought they were also operating, or proposed shortly doing so, upon another tract at Lompoc, within about three miles of their Anglo-Californian territory, the two properties in question forming the major portion of the Pacific Oilfields, Ltd. Lastly, a company in which many of them were interested—the Southern Californian Oil Syndicate—had purchased the Mahoney ranch, near Santa Ynez. All that led him to the point that, although their company were the absolute pioneers of British capital in that particular district, their judgment had been maintained, because the concerns named were not likely to invest large sums of money in what could be called “wild-cat” schemes. Therefore, it seemed to him that they had no reason to regret their venture. Whilst they heartily wished the other companies every success, no company could surpass their own—if they were successful in oil production—as regarded their geographical position. They would be able to ship the whole of their oil from their property without having to go to the expense of acquiring rights of way for pipe lines, etc. They were close by the ocean, and the Pacific railroad ran through the ranch, and so, he believed, when their company reached its producing stage, no other oil concern in California would be more advantageously situated.

Looking through the prospectus, he noticed they alluded to the Eastern market for Californian oil, which at that time only existed in theory. They simply pointed out what might or would happen, and he thought they could take credit for the correctness of their predictions. The value of the Eastern oil market was no longer a theory. The Californians were shipping large quantities of oil to Japan, Chili and the Hawaiian islands, in fact, the export of oil was now even a greater commercial undertaking than the home market, much though California needed cheap fuel for its development.

Then, lastly, at the time of forming their company and the issue of the prospectus, the United States Government had officially taken no special interest in noticing the oil fields, but latterly it had recognised its duties and its responsibilities, and it had had several well-known geologists paying particular attention to the Santa Maria and Lompoc field. He had their report before him, which was most interesting reading, and it also gave a map of the various lands including their own property. In reading that report there was one thing which struck him, and it was that owing to the fact that the names of operating companies were arranged alphabetically, the Anglo-Californian Oil Syndicate appeared at the top. He could only express the hope that that was not merely an alphabetical incident, but that in the long run they would all reap the reward of their investments, and come out on top.

The resolution adopting the report and balance-sheet was then carried unanimously.

Mr. PRING proposed that Messrs. G. Dixey and Co. should be re-elected as auditors, and that, having been seconded, was unanimously agreed to.

The CHAIRMAN, in reply to a question from Mr. Pring, said that although the company would require money shortly, it is not proposed to make a call payable this year. It might be toward the end of January.

Mr. ERNEST L. BENTLEY then proposed a hearty vote of thanks to the local committee. Those gentlemen, he said, had exercised their zeal and local influence to the utmost for the benefit of the shareholders, and he thought it was only right that they should remember them at that meeting and pass to them the vote of thanks.

This resolution was likewise carried unanimously.

In reply to a vote of thanks for presiding, the CHAIRMAN said he hoped that the next time they met together the directors would have something good to inform the shareholders of.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date December 5th, 1907, as follows:—

A fair amount of business has been done in the past fortnight, but makers complain that the prices ruling at present are unremunerative. We makes prices of oil sizes as under:—

1C	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	13/3 per box.
1C	19 $\frac{1}{4}$ × 14	120 „	110 „	13/3 „
1C	20 × 10	225 „	156 „	19/3 „

F.o.b. Wales. Tin lining and iron hooping extra.

THE CALIFORNIAN PETROLEUM REFINERIES, LTD.

The special correspondent of the *Oil, Faint and Drug Reporter* in the Californian fields furnishes his journal with a number of interesting details concerning the plant at Oil Port of the Californian Petroleum Refineries, Ltd., one of the foremost English concerns operating in California. The writer points out that the company's plant, next to the Standard, is the largest and most complete on the Californian coast. The general location is excellent for the purposes intended, having a gradual fall from the hill above of over 200 feet to the level of the sea.

Crude oil from the Santa Maria field comes in the plant's own pipe line to tanks on top of the hill. From here it runs by gravity to the stills and other refining plants. Where stills are open they are cemented. The plant terminates in the packing houses, box factory and modern improved canning filling department. An electric car conveyor lands the shipping product at the end of the terminal wharf. The wharf is almost one-half a mile long, and is constructed in the strongest manner possible. Caisson with cement inside protects the piles along tidewater lines where teredos infest. The end of the wharf is about 30 feet in depth, thus allowing some of the largest tank vessels to land. The approaches and surroundings of this wharf are being sounded and gradually cleared from obstructions. The pipe line from tanks, situated from 75 to 100 feet above water level, gives a good pressure for emptying crude or other oil directly into the ships' tanks. There is a series of these tanks for the different grades of oil manufactured from the crude (topped) fuel oil to the gasoline and coal oils. The plant is practically ready for operation, though some minor details need looking after. The buildings are all far enough apart so that, if one of them should catch fire, it could not affect the others.

SITUATIONS VACANT.

WANTED ACCOUNTANT for Petroleum Company, having knowledge of Oil Company's Accounts.

Apply, giving references, stating experience and salary required, to “B.” c/o STREETS 30, Cornhill, London.

WANTED, for Offices of large Petroleum Company, competent ASSISTANT with experience in keeping Field Records and some practical knowledge of Well Drilling.

Address, with full particulars of experience and copies of testimonials, stating salary required to “B.” c/o STREETS, 30, Cornhill, E.C.

AMERICAN NOTES

Suggested New Refinery.—It is reported that the Gulf Pipe Line Co. is now planning to erect a refinery at Big Sandy, Texas, where large supplies of Indian territory crude oil are now received through the new eight-inch trunk line.

Enormous Figures.—During the ten months of this year the Prairie Oil and Gas Co.'s runs from the Mid-Continent region reached 30,000,000 barrels, the record being for October, when they were about three and a-half million barrels.

In Alberta.—Three oil companies are now busily engaged in searching for petroleum at the base of the Rocky Mountains, but, so far, though the prospects are very encouraging, the returns have not been sufficient to encourage many speculators.

The Union Oil Company.—This enterprising concern has recently increased its monthly dividends from \$1 to \$1.25 per share. The monthly earnings are said to be considerably above this amount, but the company is laying by for further development work in all its departments.

Latest News from Batson.—Batson Prairie has awakened from its lethargy. It is now the centre of activity in the Texas field, consequent upon the bringing in of a well which is holding up at close upon 2,000 barrels per day. This new well belongs to the J. M. Guffey Petroleum Co.

Oil Products to the Fore.—During the holding of the Trans-Mississippi Congress at Muskogee, which took place last week, the Prairie Oil and Gas Co., and also the Gulf Refining Co., had special displays of their products in one of the main halls. The congress entertained no less than 2,700 delegates.

The Santa Maria Field.—The Santa Maria field is now claiming considerable attention on the part of operators, and drilling is very active in the eastern extension of the territory. Prof. Arnold, of the Geological Survey, has recently spent considerable time in the field, and his opinion is distinctly favourable.

More Tankage for the Mid-Continent Fields.—The Prairie Oil and Gas Co. is about to build another storage farm, having acquired 120 acres of land directly east of the town of Red Fork. Here there is room for twenty 35,000 barrel tanks, the site being especially favourable, for the Midland Railway passes through the land.

Difficulties in Indian Territory.—The *Oil, Paint and Drug Reporter* announces that considerable quantities of Indian Territory oil are tied up by the temporary injunction obtained against the Security Oil Co. and other concerns, restraining them from removing any of the property from the State of Texas pending suits against them.

Oil Shortage.—California is on the brink of an oil shortage, for the fact has now become known that the reserve supply in the Bakersfield and Santa Maria fields is far below what it has been, while some of the storage tanks are empty. As a consequence, market prices are advancing. The outlook is decidedly promising or operating oil companies.

Another Oil District in Texas.—San Antonio in Texas is said to be a coming prominent field for the production of oil. Two wells have been recently brought in at a spot known as the Mission field, and one of these is credited with a production of 1,000 barrels daily. Both wells are along the banks of the Lion Creek, 12 miles south of San Antonio.

Indian Oil Leases.—A highly important and very interesting meeting has recently been held at Washington between a committee representing the oil interests of the Indian Territory and the Interior Department. The oil men were accorded a careful hearing by Secretary James R. Garfield, but the result of the impression made by them is still in doubt.

Estimated Production for 1907.—It is estimated that for the present year the total petroleum production of the States will be about 150,000,000 barrels. If this should be so, it will constitute a record, the nearest approach to which was in 1905 when the total production reached 134,000,000 barrels. The south-western field is expected to contribute 64,000,000 barrels of this total, and of this quantity 46,000,000 barrels will come from Oklahoma and Indian territory.

RUSSIAN AND ROUMANIAN NOTES.

Non-success at Baicoi.—The Credit Petrolifer has decided to abandon the two boreholes which it has been drilling at Baicoi.

Another Spouter.—A borehole of the Romano-American Co. at Tetscani, in the Bacau district, has been spouting, yielding about 5 tons of oil daily from a depth of 300 metres.

Increase of Capital.—The Central Tcheleken Petroleum Co. proposes to increase its capital from 1,000,000 to 1,500,000 roubles. The new shares will be issued at a premium equal to half of the existing reserve fund.

The Tchimion Petroleum Company, operating in the Ferghana oil fields, has in its first financial year, ended 1st November, 1906, earned a profit of 598,769 roubles. Debtors amount to 37,402 roubles, and creditors 708,666 roubles.

The Raky Boring Company, of Roumania, is about to increase its capital from 2,000,000 to 15,000,000, and possibly 20,000,000 francs. This company, which is controlled by Mr. Raky, has lately taken up petroliferous concessions representing a value of about 3,000,000 francs.

Living on the Losses.—The Moscow Petroleum Co., operating in Grosny, has in its tenth financial year, 1906, incurred a loss of 43,005 roubles, which brings the total loss up to date up to 663,339 roubles. There are debtors for 24,620 roubles, and creditors for 1,134,501 roubles.

More Losses.—The Tank Storage and Carriage Co., Ltd., operating at Batoum, and controlled by the Anglo-American Oil Co., Ltd., has in its fifth financial year, 1906, incurred a loss of 42,176 roubles. The net loss to date shewn is £2,178. The paid-up capital is £68,539; debtors are £21,089.

Activity at Kertch.—A French company is actively engaged in explorations for petroleum in the neighbourhood of Kertch and has started drilling. The drilling tools and machinery have arrived by special steamer from abroad, and the import duty alone on these is said to have amounted to 100,000 roubles.

Fuel Oil Contracts.—The Roumanian Council of Ministers has authorised the administration of State Railways to conclude contracts with the Steaua Romana, Aurora, Astra, Vega, Romana-American, Trajan and Aquila Companies for the supply of 150,000 tons of crude oil at 34 francs per ton, to be delivered during a period of five years.

Concerning Mr. Raky.—It is now definitely confirmed that Mr. Raky has resigned his position of managing director of the Regatul Roman Co., and on his recommendation the direction of the affairs of the company will pass into the hands of Mr. F. Koenigs. Mr. Raky remains a member of the board of the Regatul Roman Co. and one of its largest shareholders.

The Aquila Franco-Romana.—The directors of the Aquila Franco-Romana have, in pursuance of the resolution of the general meeting, addressed an enquiry to the shareholders as to whether they wish to avail themselves of the preferential right accorded to them of subscribing to the new issue of 3,000,000 francs. The shares will be issued at par at 500 francs each. The amount to be paid up in full on or before the 31st December, 1907.

English Companies take Note.—According to the official statement of the Baku Exchange Committee, the average spot prices of crude oil and products in October were:—Light crude, in ships, 26.312 copecs per pood; in Black City, 26.187 copecs; at Bebe-Aibat, 25.937 copecs; at Balakhany, 25.687 copecs. Heavy crude, in ships, 26.558 copecs; in Black City, 26.433 copecs; at Bebe-Aibat, 26.183 copecs. Residuals, in ships, 27.532 copecs; in ambares, 27.407 copecs. Kerosene, in ships, 34.652 copecs; in waggons, 32 copecs per pood.

The Alpha Co. has struck oil in its well No. 5 at Tintea at a depth of 273 metres. During the first few days the yield was 40 tons daily, but later it settled at 25 to 30 tons. Well No. 1, of Mr. I. Koster, in the same locality, continues to yield 20 tons daily. Altogether there are now in Tintea 30 boreholes, divided among the following firms:—Alpha Co., 10; Olandeza Romana Co., 5; Neerlandeza Romana Co., 3; I. Koster, 3; O. Janmotte and Co., 2; Montana Co., 2; Popovici-Costi, 1; Alex. Ionescu, 1; Steaua Romana, 1; Franco Romana Co., 1; and Naphta Co., 1. Of these wells, 8 have already a depth above 250 metres and are daily expected to strike oil.

DELIVERIES OF PETROLEUM PRODUCTS FROM BAKU.

STATISTICS FOR THE NINE MONTHS.

The deliveries of various petroleum products from Baku during the first nine months of 1907, compared with the corresponding period of 1906, were as under (in poods):—

I.—ILLUMINATING OILS.

Destination.	Nine Months, Nine Months,	
	1907.	1906.
By Rail—		
To Batoum	20,650,534	14,664,693
„ Other Parts of Caucasus ..	1,395,831	1,262,398
By Baku-Petrovsk Line	598,962	454,928
By Sea—		
To Astrakhan	42,655,369	31,388,555
„ Petrovsk	3,219,190	1,336,559
„ Transcaspia	902,327	1,106,359
„ Other Russian Ports ..	34,778	6,520
„ Persia	641,812	703,327
By Cart	586,809	569,916
Total	70,885,612	51,493,235

II.—LUBRICATING OILS.

	Nine Months, Nine Months,	
	1907.	1906.
By Rail—		
To Batoum	5,685,320	6,009,853
„ Other Parts of Caucasus ..	69,811	104,678
By Baku-Petrovsk Line	320,324	120,305
By Sea—		
To Astrakhan	4,026,932	4,097,429
„ Petrovsk	347,949	500,759
„ Transcaspia	8,597	36,875
„ Other Russian Ports ..	4,749	8,780
„ Persia	499	249
By Cart	177,657	129,010
Total	10,641,838	11,007,938

III.—RESIDUALS.

	Nine Months, Nine Months,	
	1907.	1906.
By Rail—		
To Batoum	155,329	845,835
„ Other Parts of Caucasus ..	281,416	3,097,559
By Baku-Petrovsk Line	563,721	1,148,344
By Sea—		
To Astrakhan	201,329,066	165,002,232
„ Petrovsk	99,400	181,694
„ Transcaspia	4,546,158	4,277,626
„ Other Russian Ports ..	2,731,114	2,419,993
„ Persia	74,355	74,070
By Cart	650,593	821,285
Total	210,431,152	177,868,638

IV.—OTHER PRODUCTS.

	Nine Months, Nine Months,	
	1907.	1906.
By Rail—		
To Batoum	1,589,748	2,534
„ Other Parts of Caucasus ..	65,765	51,420
By Baku-Petrovsk Line	332,837	162,192
By Sea—		
To Astrakhan	1,815,396	1,052,794
„ Transcaspia	11,930	3,995
„ Other Russian Ports ..	370	124
„ Persia	75	1,124
By Cart	153,959	52,593
Total	3,970,080	1,330,776

V.—TOTAL OF ALL PRODUCTS.

	Nine Months, Nine Months,	
	1907.	1906.
By Rail—		
To Batoum	28,205,051	21,526
„ Other Parts of Caucasus ..	10,925,562	11,665,857
By Baku-Petrovsk Line	4,262,063	1,893,871
By Sea—		
To Astrakhan	267,159,639	221,432,173
„ Petrovsk	4,442,446	2,019,012
„ Transcaspia	5,554,185	5,729,197
„ Other Russian Ports ..	2,799,611	2,635,777
„ Persia	751,241	812,406
By Cart	1,642,959	1,590,608
Total	325,742,757	269,296,522

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR OCTOBER.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during October were as under:—

	1906.	1907.
	Quantities.	Quantities.
	Gallons.	Gallons.
CRUDE—		
Baltimore	—	—
Boston and Charlestown ..	—	—
Delaware	—	—
New York	1,483	—
Philadelphia	7,877,454	7,877,819
Galveston and Sabine ..	4,338,757	1,793,884
Total	12,217,694	9,671,703
Total value for the month, 1906 ..	..	\$674,239
„ „ „ 1907 ..	..	\$553,733

NAPHTHAS—

Baltimore	—	—
Boston and Charlestown ..	3,120	2,800
Delaware	—	—
New York	762,134	715,643
Philadelphia	963,930	2,748,651
Galveston	—	—
Total	1,729,184	3,467,094
Total value for the month, 1906 ..	..	\$194,057
„ „ „ 1907 ..	..	\$402,691

ILLUMINATING—

Baltimore	—	1,233,252
Boston and Charlestown ..	24,780	13,079
Delaware	—	—
New York	41,074,168	45,750,213
Philadelphia	31,558,416	28,191,719
Galveston	2,506,602	1,604,000
Total	75,163,966	76,792,263
Total value for the month, 1906 ..	..	\$4,760,533
„ „ „ 1907 ..	..	\$5,176,988

LUBRICATING—

Baltimore	213,811	321,650
Boston and Charlestown ..	22,655	29,248
Delaware	—	—
New York	7,887,900	7,881,603
Philadelphia	3,740,771	3,863,796
Galveston	613,769	3,900
Total	12,478,906	12,100,194
Total value for the month, 1906 ..	..	\$1,482,576
„ „ „ 1907 ..	..	\$1,506,330

RESIDUUM—

Baltimore	—	—
Boston and Charlestown ..	260,000	—
Delaware	—	—
New York	4,027	250,000
Philadelphia	3,172,127	2,454,071
Galveston	903,756	2,038,976
Total	4,339,910	4,743,047
Total value for the month, 1906 ..	..	\$143,318
„ „ „ 1907 ..	..	\$159,303

TOTAL MINERAL OILS—

Baltimore	213,811	1,554,902
Boston and Charlestown ..	310,555	45,127
Delaware	—	—
New York	49,729,712	54,597,456
Philadelphia	47,312,698	45,136,056
Galveston	8,362,884	5,440,760
Total	105,929,660	106,774,301
Total value for the month, 1906 ..	..	\$7,254,723
„ „ „ 1907 ..	..	\$7,799,075

YOKOHAMA PETROLEUM IMPORTS DURING SEPTEMBER.

The imports of petroleum products into Yokohama during September amounted to 1,137,530 gallons, and were valued at 218,401 yen. There was no kerosene imported into Yokohama during September a year ago. The total petroleum imports for the nine months of this year have amounted to 13,563,498 gallons, and are valued at 2,712,445 yen.

THE OIL FIELD ON BUFFALO CREEK.

HOW THEY "SHOOT" OIL WELLS.

A writer in *Mines and Minerals* gives an interesting account of the developments upon the oil field of Buffalo Creek, and also an explanation of the shooting of oil wells. He points out that in Brooke county, in the Pan Handle of West Virginia, and located about 50 miles south-west of Pittsburgh, Pa., an oil field is being developed that is creating considerable local interest. The development of the field began about five years ago with an experimental or "wild-cat" well on the Robert Underwood farm located on Buffalo Creek, about four miles from the Ohio River. This well, known as the Underwood No. 1, proved to be a paying producer, though its life or natural flow was short, and it has been operated for some time now by pumping. Its greatest output was probably not over 30 barrels per day at the beginning, and the well has settled down to probably one-fifth of this as a regular output.

The first well having proved a success, there was naturally a scramble for leases, not only of the adjoining farms but of land in remote locations. As a result additional wells were put down on the Underwood farm and a large number in the immediate neighbourhood on both sides of Buffalo Creek. Some of these were producers at the start, but only a few have continued to keep up a supply. The development continued in all directions until it was found that all the producers were located on a line extending from about 5 to 8 degrees east of north, the width of the pay streak being less than 500 feet. Also very little of value was found south of the Underwood wells, so that the most active development has been made recently to the northward. The line of paying wells is now about four miles long, extending across twelve farms. The total number of wells drilled, including dusters and gasers, in the district is probably about one hundred. The latest active operations have been on the farms of Demetrius Brady and John D. Brady on Titts Run. The depth of the wells varies from about 1,500 feet to 1,900 feet. The country is a hilly one, and some of the wells are in the valleys and others on the summit of the hills. On each farm the wells are located about 600 feet apart, but in several cases where the adjoining farms are not controlled by the same lease wells have been put down close to each side of the boundary line. The oil is found in the Berea sand, which is from 10 to 20 feet thick and is underlaid with 2 feet or more of slate. There is another sand 100 feet below the Berea, but it has been found barren in the few cases where tests were made by drilling down to it. Oil has been found in this lower sand, however, in some wells lately completed in Hancock county, north of Brooke county. Strong gas wells have been drilled in both east and west of the oil streak, and for many years the gas from wells along the Ohio river has been used for fuel both in residences and factories.

The development work as well as the care of the wells after being drilled in has now settled down to an operation on good business principles. The manager of the company doing the largest amount of development

the past year has located twenty wells, eighteen of which are paying producers. This is surely a very good record for locating wells. The greatest flow per well during the first few days after drilling was completed did not exceed 300 barrels per day, but in all cases the flow fell off rapidly to less than 100 barrels per day. Any accurate data regarding the maximum flow per well or the total output of the district cannot be obtained easily. It is known, however, that in one case a single well produced over \$16,000 worth of oil in less than one year, and in another case the wells on one farm are said to have produced over 33,000 barrels of oil in twelve months.

The expense of development has not been unusually large, but at the same time the farmers have probably reaped greater cash returns from the discovery than have the operators. The farmers receive one eighth of the oil clear of all expense, and in most cases a bonus has been paid for the lease. The bonuses have ranged from \$100 to \$1,000. In addition to these items there has been paid in some cases \$10 or \$12 per acre from the time the lease was signed until a paying well was drilled in or the lease forfeited. The oil is of the best grade Pennsylvania amber, and commands the highest market price, \$1.78 per barrel at present.

The bituminous coal used for drilling operations and in forges for sharpening tools was mined on one or two of the farms in the district. But gas from the wells is now used for the boilers that furnish steam not only for drilling new wells, but for the cleaning and pumping operations also. Several boilers of locomotive type are located at convenient places in the district, and steam pipe lines extend from each boiler to the engines at several wells. The boilers stand in the open without covering or protection with fittings more or less out of order. In one case the boilers have a brick setting. It is necessary to keep the engine, derrick and other other rigging at each well as they are in constant use for either the cleaning, shooting or pumping operations. In some cases the wells become clogged with paraffin. While all the wells are self flowing at first, and many of them still continue to operate this way, those that cease to flow are rigged for pumping.

The oil when delivered from the wells flows by gravity to receiving tanks in the valley, and from these to the large storage tanks at the Standard Oil Co.'s pumping station located on the west bank of Buffalo Creek farther down. The Standard pumping station is operated by a gas engine of probably 30 horse-power, which is belt connected to a combination high-and-low pressure horizontal duplex pump. The oil is forced, at a pressure varying from 800 to 1,000 pounds per square inch, a distance of some 25 miles to another pumping station at Price on the east side of the Ohio river opposite East Liverpool, Ohio. The pipe line runs west from the first pumping station, crosses the river, and goes *via* the oil fields at Scio and Goulds Station in Ohio.

The feature of greatest interest in the operation of the

wells in this district is that of "shooting" them. A few days after a well is "drilled in" a charge of about 20 quarts of nitro-glycerine is exploded in the sand for the purpose of increasing the flow of oil. Then after several months when the flow becomes sluggish or stops altogether a charge of 40 quarts is used. This greatly enlarges the cavity in the sand at the bottom of the well. Other and larger charges are subsequently used if the condition of the well requires such treatment. The charge for the first shot is applied by putting the nitro-glycerine in a tin tube and lowering it to the proper location in the oil sand. The tube is about four and a-half inches in diameter and from four to six feet long. It has a conical bottom, to the apex of which is attached a piece of two-inch tube also made of tin. The length of this small tube is made to suit the conditions of the well as shewn by careful measurement, so that when the tube rests on the bottom of the well, the charge of nitro-glycerine will be located at the proper height in the sand.

Before introducing the shot, the well is cleaned out thoroughly with the sand bucket and a swab lowered the entire depth and drawn out. The depth is measured carefully with a steel tape having a weight or iron basket fastened to the end. The top of the tube containing the nitro-glycerine for the first shot is fitted with a heavy metal disk and a fulminate cap. A heavy copper bale completes the arrangement. The bale is supported by a flat hook on a light cord that passes over a small pulley tied to the drill rod just over the well, and then to the reel clamped to the fly-wheel of the engine at the farther end of the rig. The tube is suspended in the well with the top at a convenient height above the floor of the derrick and the nitro-glycerine is slowly and carefully poured into it from the 2-gallon cans as they are brought from the waggon near by. The reel is then turned by hand and the charge slowly lowered to the bottom of the well. When the anchor tube is attached to the lower end of the nitro-glycerine tube buttons, the slack in the cord loosens the hooks, the clutch on the reel is set, and the engine operated so as to rapidly wind up the cord. All boiler fires, if any near the well, are put out, and a 2-foot piece of 2-inch pipe called a "go-devil" is dropped into the well. After waiting to hear the report of the explosion as transmitted instantly by the well casing, and thus being assured that it is a live shot, the "shooter" rapidly hunts a safe location with the other spectators to watch the results. After quite an appreciable time, which seems much longer to the spectators than it really is, a gradually increasing roar is heard, followed by a grand fountain display of gas, oil and rocks, the latter making a noisy bombardment of the derrick. The oil generally rises above an 80-foot derrick, and during the progress of the display the derrick is sometimes entirely hid from view by the cloud of oil. It is a sight well worth going a long distance to witness. The pieces of rock from the Berea sand and the slate are usually small, though sometimes a rock as large as one's fist is forced out. In case it is not convenient to take the empty nitro-glycerine cans back to the maga-

zine for refilling, the shooter destroys them by means of a fuse and cap. The cans are piled up at some out-of-the-way place and exploded, the nitro-glycerine adhering to the inner surface of the cans is powerful enough to annihilate the cans and make a good sized excavation in the ground where they were located.

The subsequent shots are applied in a different manner, as the tube containing the charge will not stand vertical in the well, but drops into the cavity formed by the previous shot or shots at the bottom of the well. The nitro-glycerine is poured into several tin tubes about 3 or 4 feet long. These have conical ends, and the top of each tube has a small nozzle for introducing the nitro-glycerine, by the use of a funnel. Each tube has a copper bale at the top, and some of them have a bale also at the bottom. By this arrangement the tubes are lowered into the well in pairs, two being tied together by a short piece of twine extending from the top bale of the lower tube to the bottom bale of the upper tube. When filled, the nozzle is closed with a cork.

The pairs of tubes lie in irregular positions in the cavity at the bottom of the well, and it is not possible to fire the charge by dropping a "go devil" on to a cap attached to the top of any of the tubes. Hence a fuse is used for firing the charge. For a 1,700-foot well a length of from 30 to 36 inches of fuse is used. After the two tubes of the squib are placed together, with the end of the fuse leading from the opening in the top, earth is filled into the annular space between the tubes and the top of the outer tube crimped over around the inner one, and the extra length of fuse coiled and held snugly in place. The inner tube is then filled about two-thirds full of nitro-glycerine and corked. The construction of the squib is such that the fused cap is surrounded by the nitro-glycerine, and thus is in the best location to insure an explosion of the charge. The fuse is lighted with a match and the squib dropped into the well. An awl and a pair of pliers are the only tools needed for making the squib.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended November 23rd was 314,000 poods, or 5,063 tons; and for the week ended November 30th was 319,000 poods, or 5,143 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended November 24th was 268,000 poods, or 4,321 tons; and for the week ended December 1st was 271,000 poods, or 4,369 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 24th November was 141,460 poods, or 2,281 tons; and for the week ended 1st December, 128,345 poods, or 2,070 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 24th November was 159,119 poods, or 2,565 tons; and for the week ended 1st December was 147,623 poods, or 2,380 tons.

The American Oil Market.

New York, Week ended Nov. 23rd.

Operations in the lower south-west fields have assumed a routine character, and there is unmistakable evidence of a falling off in development work incident to the season. About the only districts where there is a suggestion of activity are those involving the least expenditure of energy and expense, the shallow sand territory, but nothing of an especially stimulating nature has been disclosed. Several deep sand operations have been prosecuted in Wetzel and Monongalia counties, West Virginia, but the results have yielded no more encouragement than attended those previously reported. Other similar tests are due, says the *Oil, Paint and Drug Reporter*, the outcome of which is regarded as having important bearing on the possibilities of the lower strata. One of the few exceptions to the general rule of light wells, gassers and dusters during the week was a producer that started at the rate of 75 barrels a day in the Wellsburg field of Hancock county, somewhat in advance of defined limits. Several wild cat ventures have been reported in Kanawha and Clay counties, with little indication as yet of anything to justify the work. Lincoln county, in the same State, has been the centre of sustained interest, recent tests being expected to determine an extension of producing territory. With the failure to develop a lead from the big producer in the Bristoria district of Greene county, Pa., there has been a decided check to operations there. The well is said to be maintaining more than 100 barrels a day after a steady production since last July. Operations have been pushed in the Lima field during the week, especially in the north-western Ohio end, where 30 completions were recorded, 29 of which contributed a new production of 655 barrels, or more than $22\frac{1}{2}$ barrels as the average per well. Senega county remains in the lead, two new wells yielding 165 barrels.

The south-western section of Indiana, near Princeton, attracts principal interest, and the character of the wells brought in sustains confidence in connecting the territory with the Bridgeport field in Illinois, about 40 miles to the west. The intervening strip is dotted with new leases, and a number of tests will probably be started before weather conditions suspend operations. The runs from the wells for the entire Lima field for the first sixteen days of the month aggregated 465,815 barrels, against which were recorded deliveries reaching a total of 648,088 barrels, reducing stocks by 182,273 barrels. A feature of the Illinois field is the extension of facilities for caring for the heavy output, and before long it is believed that a market will be afforded for the entire production of the State, a consummation that is likely to determine its actual petroleum resources. The pipe line runs of Illinois crude for the first sixteen days of the month were 1,229,336 barrels, representing a material decline from the October average, due to the lack of tankage and not to any decrease in productiveness. The deliveries for the same period amounted to but 2,139 barrels. Field operations have been prosecuted with vigour during the last week, our correspondent reporting it as one of the banner periods of the year. Completions numbered 121, from 99 of which there was a production of 9,293 barrels, an average of nearly 94 barrels per well. Crawford county furnished the best results, with 70 completions, 6 dry holes, and 6,513 barrels. A feature of the Kentucky-Tennessee field during the week was the strike of two good producers in Wayne county, Kentucky, one responding to the extent of 150 barrels and other of 100 barrels a day.

REFINED AND PRODUCTS.—The local market for refined has presented nothing of noteworthy interest beyond a substantial increase in the export movement, due to the facilities for shipping in bulk, this aggregate reaching 8,850,000 gallons. The total volume of clearances for the week was 11,243,410 gallons, against 7,580,520 gallons during the previous week, of which 5,196,140 gallons were in bulk. The only charter re-

ported here was one for 150,000 cases for December shipment to Japan, Philadelphia loading. Domestic trading continues along even lines, the seasonable average being well sustained.

The feature of the market for the products during the week has been the heavy export movement in naphtha, the aggregate being 2,721,180 gallons, against 48,860 gallons during the previous week. The increase is due chiefly to the availability of a tank steamer here. Quotations are unchanged for all descriptions.

CLOSING QUOTATIONS

CRUDE.	Week ended	
	Nov. 16.	Nov. 23.
	1907.	1907.
Pennsylvania crude in bbls.	\$8.20	\$8.20
Pennsylvania crude in bulk	4.75	4.75
Residuum, bbls. for export	6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Nov. 16.	Nov. 23.
		1906.	1907.
Pennsylvania	1.64	1.78	
Tiona	1.74	1.78	
North Lima	0.98	0.94	
South Lima	0.93	0.89	
Indiana	0.93	0.89	
CANADIAN OIL:			
Petrolia	1.37	1.34	

REFINED—FOR EXPORT.

		Week ended	
		Nov. 16.	Nov. 23.
		S.W.	W.W.
Barrels, cargo per gal.	\$8.75	@10.75	
Philadelphia	8.70	@10.70	
Bulk, New York	5.00	@7.00	
Bulk, Philadelphia	4.95	@6.95	
Cases, New York	10.90	@13.90	
Cases, Philadelphia	10.85	@13.85	

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Nov. 16.	Nov. 23.
		1907.	1907.
3,000 to 10,000	11.05	11.05	
1,000 to 3,000	11.10	11.10	

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Nov. 16.	Nov. 23.
120 fire test, S.W. .. in barrels	12	12	
130 fire test, S.W.	12½	12½	
150 fire test, W.W.	13½	13½	
In bulk from tanks	10	10	
300 fire test	13½@14	13½@14	

NAPHTHA AND GASOLINE.

		Week ended	
		Nov. 16.	Nov. 23.
Naphtha, crude, car. lots, 68 @ 72 deg.	15.00	15.00	
Gasolene, 86 deg.	24.00	24.00	

PENNSYLVANIAN OIL RUNS from Nov. 13th to Nov. 18th were:—Nov. 13th, 93,425; Nov. 14th, 186,106; Nov. 15th and 16th, 222,896; Nov. 17th, 197,841; Nov. 18th, 100,822. For the month of September, 2,613,959.

THE DELIVERIES OF PENNSYLVANIA OIL from Nov. 13th to Nov. 19th were:—Nov. 13th, 148,451; Nov. 14th, 148,632; Nov. 15th, 223,587; Nov. 16th and 17th, 302,603; Nov. 18th, 170,074; Nov. 19th, 164,707. For the month of September, 5,654,718.

CLEARANCES FOR THE WEEK.

During the week ended Nov. 22nd, and since Jan. 1 the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.	Year.	1906.
Refined	11,243,410	433,955,995	418,743,084	
Crude	—	2,477,895	235,000	
Naphtha	2,721,180	10,626,000	14,669,984	
Residuum	—	2,707,097	4,287,600	

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

		Gallons.
From New York, week ended Nov. 22nd ..	14,991,213	
Total from New York, from Jan. 1st, 1907 ..	631,174,884	
Same period last year	559,283,147	
Increase	71,891,737	
From United States, week ended Nov. 22nd ..	23,805,215	
Total from United States, since Jan. 1st, 1907 ..	1,143,620,203	
Same period last year	1,093,316,691	
Increase	50,303,517	

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The "Review" Shipping List.

DECEMBER 6, 1907.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Selzaete	London	Arr. Dec. 4	ETELKA	Philadelphia	Cette	P. Del. Break., Nov. 21
ALICE ISABELLE..	Sables d'Olonne	Philadelphia	Arr. Dec. 2	EUPLECTELA	Singapore ..	Tientsin	L. Nov. 15
ALEMBIC	Sydney(C.B.)	New York ..	Arr. Nov. 20	EXCELSIOR	New York ..	Rotterdam ..	L. Nov. 30
AMERICAN	Antwerp	New York ..	Arr. Dec. 4	EZIO	—	—	Coasting Peru
APPALACHEE	Kustendje ..	Calcutta	Arr. Nov. 20	FRANCE MARIE ..	Philadelphia	Marseilles ..	P. Del. Break, Nov. 26
APSCHERON.....	Genoa	Batoum	L. Nov. 29	GEESTEMUNDE ..	Stockholm ..	Tyne	L. Dec. 1
ARAL.....	Philadelphia	Dover	P. Del. Break., Nov. 23	GENESSE	London and Tyne	New Orleans	L. Sunderland, Nov. 27
ARAS.....	Penarth	New York ..	Arr. Nov. 27	GEORGIAN PRINCE	Philadelphia	Rouen	Arr. Dec. 3
ARGYLL	—	—	Coasting U.S. (Pacific)	GOLDMOUTH	Cardiff	Singapore ..	Arr. about Dec. 2
ASHTABULA	San Francisco	Shanghai ..	Arr. about Dec. 2	GUTHEIL	Hamburg ..	Philadelphia	Arr. Dec. 1
ASTRAKHAN.....	Hamburg and Tyne	Philadelphia	P. Dunnet Head, Dec. 2	HAINAUT	Antwerp	Alexandria..	At Malta, Nov. 28-29
ATLAS	—	—	Coasting U.S. (Pacific)	HARRY WADSWORTH	Port Arthur (Texas)	Antwerp	L. Sabine Pass, Nov. 24
AUGUSTA	Liverpool ..	Kustendje ..	L. Nov. 27	HELIOS.....	New York ..	Nordenhamn	Arr. Nov. 28
AUGUST KORFF..	New York ..	Avonmouth	Arr. Dec. 2	HOTHAM NEWTON	Calais	Middlesbro'	Arr. Nov. 22
AUREOLE	Belfast	New York ..	Arr. Nov. 25	HOUSATONIC	Bengkalis ..	—	At Suez, Nov. 26-27
AZOV.....	—	—	Trading on W.C. of South Amca.	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BAKU STANDARD	Rouen	Philadelphia	P. Lizard, Nov. 29	IOANNIS COUTZIS	Cardiff.....	Piræus.....	L. Nov. 21
BALAKANI	Port Arthur (Texas)	Rotterdam ..	L. Newport News, Nov. 26	IROQUOIS	London	New York ..	P. Prawl Pt., Dec. 3
BATOUM	Karatzu	Singapore ..	L. Oct. 25	J. B. AUG. KESSLER	New York ..	Thameshaven	P. Lizard, Dec. 4
BAYONNE	Leghorn	Philadelphia	Arr. Nov. 21	JAMES BRAND	Philadelphia	London	L. Nov. 31
BEACON LIGHT ..	Philadelphia	Dover	At Del. Break., Nov. 19	JULES HENRI	Philadelphia	Marseilles ..	P. Gibraltar, Nov. 21
BEME	Bombay	Rangoon....	L. Oct. 22	KURA	Tyne	Philadelphia	Arr. Nov. 30
BLOOMFIELD	Barry	Batoum	L. Constant'ple, Nov. 28	LA CAMPINE.....	Philadelph na	Antwerp	P. Lizard, Dec. 4
BORJOM	Alexandria ..	Batoum	L. Theodosia, Nov. 23	LA FLANDRE	New York ..	Antwerp	Arr. Nov. 8
BRILLIANT	Philadelphia	Copenhagen	P. Del. Break, Nov. 25	LA HESBAYE.....	Batoum	Antwerp	L. Constant'ple, Nov. 27
BROADMAYNE	Havre	New York ..	Arr. Nov. 29	LA MADELEINE ..	Algiers	Brest	Arr. June 16
BULLMOUTH	Samboe	Nagasaki ..	Arr. Nov. 29	LA VIGUESA	Corunna	Ferrol	L. Nov. 23
BULYSSES	New York ..	Madras	P. Ponta Ferraria, Dec. 1	LACKAWANNA....	Philadelphia	Savona	P. Del. Break, Nov. 23
BURGERMEISTER PETERSEN	Stockholm ..	Hamburg ..	P. Brunsbuttel, Nov. 9	LANSING.....	Astoria	Pt. San Luis	P. Pt. Reyes, Nov. 15
CALCUTTA.....	San Francisco	Shanghai ..	L. Oct. 28	LE COQ.....	Santander ..	Philadelphia	L. Nov. 28
CAPTAIN A. F. LUCAS	London	Port Arthur	P. Sand Key, Nov. 25	LOUTSCH	Batoum	Odessa	L. Nov. 16
CARDIUM	Thameshaven	Cardiff	P. Lizard, Dec. 4	LUCERNA	Port Talbot	New York ..	L. Nov. 19
CATANIA	Seattle.....	—	L. Nov. 11	LUCILINE	Rouen.....	New York ..	P. Havre, Nov. 24
CAUCASIAN	Port Arthur (Texas)	Hamburg ..	L. Nov. 30	LUMEN.....	Port Talbot	Port Arthur (Texas)	L. Nov. 27
CHARLOIS	Rotterdam ..	Philadelphia	P. Scilly, Nov. 30	LUX	Philadelphia	Alicante	P. Del. Break., Nov. 20
CHESAPEAKE	Aroe Bay ..	—	At Suez, Nov. 28	MANHATTAN	New York ..	Plymouth ..	Arr. Nov. 22
CHESTER	Antwerp	New York ..	Arr. Nov. 26	MANNHEIM	Hamburg ..	New York ..	Arr. Nov. 28
CIRCASIAN PRINCE	Callao	Caleta Buena	Arr. Oct. 1	MARGARETHA ..	Philadelphia	Genoa and Tunis	Cld. Genoa, Nov. 25
CLAM	Singapore ..	Balekappan	L. Oct. 31	MAVERICK.....	Seattle.....	San Francisco	Arr. Oct. 6
COL. E. L. DRAKE	San Francisco	Astoria	Arr. Nov. 20	METEOR	Batoum	Vladivostock	P. Perim, Nov. 15
COWRIE	New York ..	Messina	L. Nov. 26	MEXICAN PRINCE	Tyne	Constant'ple	L. Dec. 4
CUYAHOGA	Tyne	Philadelphia	Arr. Nov. 24	MIRA	Hamburg ..	Tyne	L. Dec. 3
CYMBELINE	Penarth	New York ..	Arr. Dec. 1	MUREX.....	Singapore ..	Samboe	L. Oct. 29
CZAR NICOLAI II.	Batoum	Hamburg ..	Off the Wight, Dec. 2	NARRAGANSETT..	London	New York ..	P. Southend, Nov. 24
DAGHESTAN.....	Batoum	Rouen	P. Gibraltar, Dec. 1	NERITE	—	—	Tr. in China Seas
DAKOTAH	Singapore ..	Yokohama ..	L. Oct. 31	NEW YORK	New York ..	Southampton	L. Nov. 30
DELAWARE	Baltimore ..	London	P. Cape Henry, Nov. 23	OCEAN	Antwerp	Kustendje ..	Off Ushant, Nov. 24
DEUTSCHLAND ..	New York ..	Rotterdam ..	P. Dover, Dec. 4	OILFIELD	Rouen	New York ..	P. Prawl Pt., Nov. 23
DIAMANT	Stettin.....	Philadelphia	Arr. Dec. 2	ORANJE PRINCE..	Flushing....	Tyne	L. Dec. 3
EDWARD DAWSON	Port Arthur (Texas)	Antwerp ..	P. Cape Henry, Nov. 15	ORIFLAMME	Novorossisk	Rouen	Arr. Dec. 3
ELAX.....	Kustendje ..	Kurrachee & Bombay	At Port Said, Nov. 30-Dec. 1	OSCEOLA	Wilmington	Bremen	L. Nov. 26
ELISE MARIE	Philadelphia	Flushing	P. Butt of Lewis, Nov. 30	OTTAWA	London	Philadelphia	Arr. Dec. 2
ENERGIE	Danzig	Philadelphia	L. Tyne, Nov. 18	OURAL	Philadelphia	Hamburg ..	L. Nov. 26
ERIVAN	Batoum	Manchester	P. Constant'ple, Nov. 30	PALEMBANG	Hong Kong..	Palembang..	L. Oct. 24
				PAULA	Pillau	Hamburg ..	Arr. Nov. 4
				PECTAN	Port Arthur (Texas) and Copenhagen	London	Arr. Oct. 6

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PENNOIL.....	Tyne	Philadelphia	Arr. Nov. 28	SPONDILUS	Singapore ..	Rotterdam ..	Off the Wight, Dec. 4
PERLAK	Calcutta....	Madras	L. Nov. 12	STANDARD	Stettin.....	Tyne	Arr. Nov. 25, and Sd. Nov. 26
PHOEBUS	New York ..	Hamburg ...	Sp. Nov. 27, 41 N. 63 W.	STROMBUS	Samboe	Channel	At Suez, Nov. 28-29
PINNA	Port Harford	Yokohama ..	L. Gaviota, Nov. 27	SURAM.....	Tyne	Batoum	Arr. Dec. 3
POTOMAC	Avonmouth	New York ..	Arr. Nov. 27	SUWANEE	Barrow	Philadelphia	L. Nov. 23
PROMETHEUS....	New York ..	Hamburg ...	Arr. Dec. 1	SVIET	Batoum	Alexandria..	Arr. Nov. 26
PRUDENTIA	Balekpappan	Palembang..	Arr. Nov. 11, for Calcutta	TELENA	Cardiff.....	New York ..	Arr. Nov. 29
QUEVILLY.....	Rouen.....	Philadelphia	L. Nov. 15	TEREK.....	London	Port Arthur (Texas)	Arr. Dec. 3
RION.....	Philadelphia	Foynes	L. Dec. 4	TIFLIS	Antwerp....	Batoum	Arr. Dec. 2
ROCK LIGHT	Amsterdam..	Kustendje ..	P. Oitavos, Nov. 30	TIOGA	London	Galveston ..	P. Sand Key, Dec. 2
ROMANY.....	Barrow	Kustendje ..	P. Constant'ple, Nov. 29	TONAWANDA	Muroran....	San Francisco	Arr. Nov. 29
ROSSIJA	Cronstadt ..	London	Arr. Dec. 4	TROCAS	Hankow	Shanghai ..	Arr. Dec. 3
ROTTERDAM	Calcutta	Boston & New York	P. Gibraltar, Nov. 27	TURBO.....	Tyne	Batoum	L. Nov. 28
RUSSIAN PRINCE	Philadelphia	Vera Cruz & Tampico	L. Galveston, Nov. 22	TUSCARORA	Liverpool ..	Kustendje ..	L. Dec. 1
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	TWINGONE	Rangoon ..	Madras	L. Nov. 23
SAN CRISTOBAL..	Philadelphia	Rouen	L. Dec. 4	VEDRA.....	Palembang..	Yokohama ..	L. Dec. 3
SAN IGNACIO	Philadelphia	Gijon	P. Del. Break., Sept. 16	VILLE DE DIEPPE	Philadelphia	Rouen	P. Del. Break., Nov. 19
DE LOYOLA	—	—	—	VOLUTE	Shanghai ..	Balekpappan	Arr. Nov. 28
SAXOLEINE	Rouen	Tyne	Arr. Dec. 3	WASHINGTON....	Rotterdam..	—	P. Beachy Head, Dec. 3
SEMINOLE.....	San Francisco	Tongkee	Arr. Nov. 22	WEEHAWKEN	Tyne	New York ..	P. Dunnet Head, Dec. 2
SINGU	—	—	Tr. in East Indies.	WILLKOMMEN....	Gothenburg	Philadelphia	Arr. Dec. 1
SNOWFLAKE.....	Philadelphia	Rouen	L. Nov. 16	WINNEBAGO	San Francisco	Canton	At Moji, Dec. 3
SOYO MARU	Antwerp	San Francisco	L. St. Vincent (C.V.), Nov. 15				

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

December 6th, 1907.

The latest quotations for Petroleum are as follows :— Russian, 6¾d.-6½d.; American, 7d.-7½d.; Water White, 8d.-8½d.; Roumanian, 6¾d.-6½d.

LUBRICATING OILS

are unchanged as follows :—

- American pale, £7 7s. 6d. to £11.
- American dark cylinder, from £9 2s. 6d.
- American filtered cylinder, from £11 19s. 6d.
- No. 1 Russian, £10 5s.

TURPENTINE.

Business in American Turpentine is dull, and prices are lower ; for Spot quotations are 35s. 4½d., and for the first four months of next year, 36s. 6d.

LIVERPOOL OIL MARKET.

December 5th.

Refined oils are quiet, and sellers quote 6¾d. for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0½d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, December 5th.

Refined, in cases, is steady at 10·90; Standard White, 8·75; Credit balances, 1·78c.

PHILADELPHIA, December 5th.

Standard White is still quoted at 8·70.

RUSSIA.

BAKU, December 2nd.

The Baku oil market is more firm. Heavy crude oil, spot, 24½ copecs per pood. Light crude, delivery during 11 months from December, 27¾ copecs; light crude, delivery during coming navigation season, in ships, 28½ copecs. Residuals, in ships, December-January, 25¾ copecs.

BELGIUM.

ANTWERP, December 1st.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, December 1st.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34·25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, December 1st.

The kerosene market is firm. The price of American Standard White is 7·55 marks per 50 kilos; Russian, 7·35 marks.

ROUMANIA.

November 28th.

Crude oil from different fields, including pipe line charges, per 100 kgs.	Franks.
Refined oil, exclusive of taxes	3·90-4·05
Motor benzine, including taxes	5·50-7·00
Benzine, doubly refined	23·00-24·00
Residuals in tank waggons, at refinery	25·00-26·00
Paraffin	3·60-3·80
	120·00-125·00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	6·75-7·05
Benzine, sp. gr. 0·710-0·715	20·00-21·00
" sp. gr. 0·715-0·720	19·00-20·00
" sp. gr. 0·730-0·740	15·00-15·50
" sp. gr. 0·745-0·755	12·00-13·00

INDIA.

BOMBAY, November 16th.

Market still strong.

Standard Oil Co., of New York.

Current rates are :—

American, " Snowflake," 150 deg.	Rs. 6 4 2
" Chester, 125 deg.	4 12 2
" Monkey Brand, 125 deg.	4 4 2
" Bulk, 125 deg. (in local made tins)	3 12 6
" " 125 deg. (8 Imperial gallons)	3 2 6
" " "White Camelia" brand, 125 deg.	No stock.

The Asiatic Petroleum Company, Limited.

Current rates are :—

Burmah oil, in tins, per pair	3 8 0
Sumatra " Rising Sun," bulk, per unit	3 3 0
" " " " tins, per pair	3 13 0
Silverlight cases, per case	5 4 0
Sumatra, " Anchor " per case	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

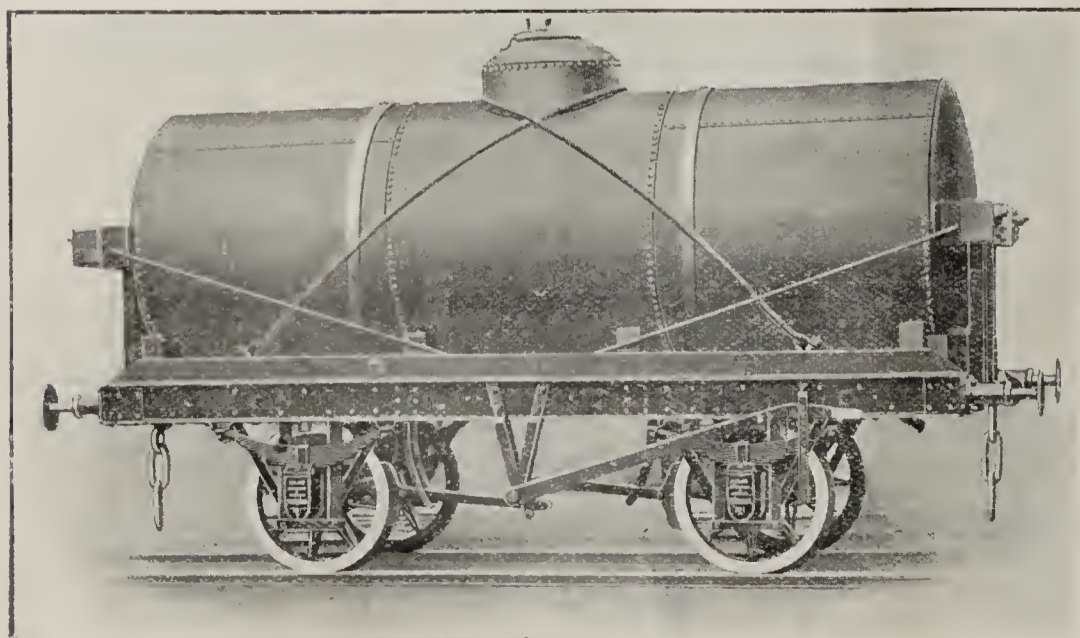
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FOR THE WEEK ENDED 25TH NOVEMBER, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
Nov. LONDON—				
19	Ragosine and Co. . . .	Lub.	28,460	St. Petersburg
19	London and India Docks Co. . .	"	1,440	Hamburg
19	Lunham and Moore . . .	"	60	New York
19	Anglo-American Oil Co. . . . (Narragansett)	"	255,650	"
19	" . . .	Lamp	2,658,860	"
21	Mordaunt Bros. . . .	Lub.	10,500	"
21	Scott's Wharf . . .	"	4,000	"
21	Fielder, Hickman and Co. . .	"	17,600	"
21	W. B. Dick and Co. . . .	"	4,790	Philadel.
21	T. H. Lee . . .	"	40	Hamburg
21	Page, Son and East . . .	"	1,040	Antwerp
22	G. and H. Green . . .	"	13,610	New York
22	Perkins and Homer . . .	"	2,480	Philadel.
22	White and Son . . .	"	4,000	"
22	Mordaunt Bros. . . .	"	4,200	"
23	Union Lighterage Co. . . .	M. Colza	2,060	"
23	" . . .	Lub.	18,860	"
25	Anglo-American Oil Co. . . .	"	22,400	"
25	" . . .	"	69,480	New York
25	Scott's Wharf . . .	"	2,000	"
25	Fielder, Hickman and Co. . .	"	17,560	"
25	H. Finkler and Co. . . .	"	4,370	Fiume
25	Joseph Behague (Oriflamme) . .	Benzine	309,000	Novorossisk
25	London and India Dock Co. . .	Lub.	1,200	Hamburg
25	T. H. Lee . . .	"	270	"
LIVERPOOL—				
20	Pickford's . . .	L. Paste	500	"
21	Meade-King, Robinson & Co. . .	Lub.	4,000	"
21	" . . .	"	44,800	Philadel.
21	A. Hopps and Sons . . .	Resid.	5,460	"
21	Worthington and Boler . . .	Lub.	8,360	"
21	W. B. Dick and Co. . . .	"	15,250	"
22	Crew, Levick and Co. . . .	"	22,600	"
22	Anglo-American Oil Co. . . . (Augusta)	Gas	838,690	"
23	Ismay, Imrie and Co. . . .	Lub.	1,000	New York
25	Vacuum Oil Co. . . .	"	11,200	"
25	Meade-King, Robinson & Co. . .	"	10,880	Baltimore
25	W. Gibson and Sons . . .	Lamp	2,050	Boston
25	H. E. Cook . . .	Lub. Gr.	800	Hamburg
25	J. and W. Wilson . . .	"	110	Antwerp
BRISTOL—				
19	H. R. James and Sons . . .	Lub.	22,160	New York
19	Pickfords, Ltd. . . .	"	370	Hamburg
22	First Anglo-Russian Oil Co. . .	"	800	"
22	E. Stock and Sons . . .	"	2,050	"
25	W. Smith and Co. . . .	"	21,400	New York
GOOLE—				
23	Lanc. and York. Ry. Co. . . .	"	1,200	Antwerp
GRIMSBY—				
21	J. Sutcliffe and Son. . . .	"	280	Hamburg
21	" . . .	"	1,680	Antwerp

DATE	PORT AND IMPORTERS	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Nov. WEST HARTLEPOOL—				
19	W. Hartlep'l Steam Nav. Co. . .	Lub.	700	Hamburg
HARWICH—				
23	D. Howard . . .	"	140	Antwerp
HULL—				
19	T. Meredith, Roberts and Co. . .	"	310	"
19	Geo. Hardy and Co. . . .	"	130	"
19	Wilsons and N.E. Railway . . .	"	4,400	"
Shipping Co. . . .				
19	" . . .	"	1,200	St. Petersburg.
21	" . . .	"	60	Odessa
21	" . . .	"	12,000	New York
22	" . . .	"	24,600	"
22	" . . .	"	2,520	Antwerp
MANCHESTER—				
19	J. T. Fletcher and Co. . . .	"	110	"
19	Pickford's, Ltd. . . .	"	190	Hamburg
19	D. Currie and Co. . . .	"	480	"
19	Meade-King, Robinson & Co. . .	"	15,200	Philadel.
19	T. Wilson, Sons and Co. . . .	"	1,470	"
19	Diamond Lubricating Co. . . .	"	3,000	New York
19	Bramwell, Fern and Co. . . .	"	1,120	"
19	Liverpool Storage Co. . . .	"	24,800	"
21	Geo. B. Taylor . . .	"	126,400	"
21	" . . .	"	149,400	Philadel.
21	C. H. Morton and Sons . . .	"	4,000	"
22	Crew, Levick and Co. . . .	"	13,180	"
22	" . . .	M. Colza	10,820	"
22	D. Currie and Co. . . .	Lub.	1,200	Hamburg
25	W. Hodgson and Co. . . .	"	1,200	"
MIDDLESBRO'—				
23	J. J. Sutherland . . .	"	800	Antwerp
NEWCASTLE—				
21	Tyne-Tees S.S. Co. . . .	"	800	Hamburg
21	" . . .	"	1,000	Antwerp
25	" . . .	"	4,480	"
PLYMOUTH—				
23	Anglo-American Oil Co. . . . (Manhattan)	Lamp	1,168,990	New York
SOUTH SHIELDS—				
22	Hawthorn, Leslie and Co. . . . (Timsah)	Fuel	81,670	Amsterdam
ABERDEEN—				
22	R. Cannon Reid and Co. . . .	Lub.	320	Hamburg
22	" . . .	Lamp	1,600	"
GLASGOW—				
21	Clyde Shipping Co. . . .	Lub.	250	Antwerp
21	Anchor Line . . .	"	74,200	New York
25	" . . .	"	17,040	"
GRANGEMOUTH—				
22	Graham-Yool and Co. . . .	Lamp	4,800	Hamburg
22	" . . .	"	4,800	"

MIDLAND RY-CARRIAGE & WAGON CO., LTD.,

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 LONDON, E.C.

DEPOTS & AGENTS EVERYWHERE IN THE UNITED KINGDOM.

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Nov.	LEITH—			
19	W. Graham-Yooll and Co. . .	Lamp	4,360	Hamburg
19	J. Currie and Co. . .	Lub.	1,200	"
19	G. Gibson and Co. . .	"	400	Boulogne
19	"	"	1,760	Antwerp
21	"	"	1,040	"
22	W. Graham-Yooll and Co. . .	"	6,800	Hamburg
	Total for Week . . .		6,244,510	

Deduct to Correct :—

BARROW—

1/11 Asiatic Pet. Co. (Romany) . . Spirit 26,510 Singapore

FOR THE WEEK ENDED 2ND DECEMBER, 1907—

LONDON—

26	Livett Frank and Son . .	Lub.	400	New York
26	Anglo-American Oil Co. . .	"	96,320	"
26	" (Iroquois) . .	Lamp	1,086,300	"
26	" . .	Gas	1,418,400	"
26	Bowring Petroleum Co. . .	Lub.	890	Philadel.
26	T. H. Lee . .	"	60	Hamburg
26	Burt, Boulton and Heywood	C.Naph.	4,410	Terneuzen
26	Asiatic Petroleum Co. . .	Benzine	2,128,920	Pulo Samboe
	(Cardium)			
26	" . .	Fuel	73,500	"
28	Van Oppen and Co. . .	Naph.	120	Antwerp
28	Page, Son and East . .	Lub.	560	"
28	A. Brown and Co. . .	"	3,600	Philadel.
29	B. Jacob and Sons . .	"	6,220	"
29	Pickfords . .	"	50	Hamburg
29	J. Harrison . .	Lub.Gr.	120	Antwerp
30	W. B. Dick and Co. . .	Lub.	10,000	Philadel.
Dec.				
2	Mercantile Lighterage Co. . .	"	21,400	"
2	London and India Docks Co. . .	"	3,960	Hamburg
2	T. H. Lee . .	"	720	"
2	" . .	Lub. Gr.	130	"
2	A. Brown and Co. . .	Lub.	2,000	"
2	Page, Son and East . .	"	920	Antwerp
2	Schenker and Co. . .	"	580	"

Nov. LIVERPOOL—

26	J. T. Fletcher and Co. . .	Lub.	110	Antwerp
26	Stockdale and Doel . .	"	2,740	Boston
26	Geo. B. Taylor . .	"	1,200	New York
28	Meade-King, Robinson & Co. . .	"	6,000	Hamburg
29	" . .	"	36,800	Philadel.
29	W. B. Dick and Co. . .	"	22,580	"
29	Bowring Petroleum Co. . .	"	1,530	"
29	George B. Taylor . .	"	1,400	"
29	Crew, Levick and Co. . .	"	11,390	"

Dec.

2	W. B. Dick and Co. . .	"	33,350	New York
2	Valvoline Oil Co. . .	"	2,870	"
2	Vacuum Oil Co. . .	"	15,200	"
2	Bowring Petroleum Co. . .	"	290	Trieste
2	Pickfords, Ltd. . .	"	190	Antwerp
2	Penwarden and Jackson . .	"	250	"

Nov. BRISTOL—

26	H. R. James and Sons . .	Lub.Gr.	360	New York
28	" . .	Lub.	11,420	"
29	" . .	"	21,400	"

DATE.	PORT AND IMPORTER.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Nov.				
29	Ford and Canning . .	Lub.	1,400	New York
29	W. Smith and Co. . .	"	760	"
	GOOLE—			
28	Lancs. and Yorks. Ry. . .	"	360	Hamburg
	GRIMSBY—			
28	J. Sutcliffe and Son . .	"	40	Antwerp
	HULL—			
9/11	British Pet. Co. (Suram) . .	Lamp	990,000	New York
26	Anglo-American Oil Co. . .	"	1,020,120	Philadel.
	(Weehawken)			
26	Wilsons and N.E. Railway	Lub.	80	Antwerp
	Shipping Co. . .			
28	" . .	"	200	"
28	" . .	"	1,200	"

MANCHESTER—

26	Geo. B. Taylor . .	"	600	Hamburg
28	D. Currie and Co. . .	"	40	"
28	J. T. Fletcher and Co. . .	"	70	Antwerp
5/10	British Petroleum Co. (Mira)	Lamp	1,397,000	Philadel.

NEWCASTLE—

26	Tyne-Tees Steamship Co. . .	Lub.	750	Hamburg
28	" . .	"	1,160	"

SWANSEA—

29	Burgess and Co. . .	"	390	"
----	---------------------	---	-----	---

GLASGOW—

28	Clyde Shipping Co. . .	"	120	Antwerp
----	------------------------	---	-----	---------

LEITH—

26	J. Currie and Co. . .	"	920	Hamburg
26	W. Graham-Yooll and Co. . .	Lamp	4,360	"
26	Henderson and McIntosh . .	Lub.	28,240	Philadel.

Total for Week . . . 8,476,470

Total for the Fortnight . . . 14,720,980

Add to Correct :—

MIDDLESBRO'—

1/10 Hanson Brown and Co. . . Naph. 3,500 Rotterdam

Deduct to correct :—

HULL—

12/11 British Petro. Co. (Kura) . . Lamp 99,000 Kustendje

PATENT.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.)

APPLICATION FILED IN GREAT BRITAIN.

Improved Means for Boiling Oils.—Linoleum Manufacturing Co., Ltd., and Alexander Hugh Dewar, 24, Southampton Buildings, London. No. 25721 of 1907.

Telegraphic Address:—"OLEINE."

Telephone Nos.:—{ 249 & 254 LIVERPOOL.
1990 MANCHESTER.

MEADE-KING, ROBINSON & Co.,

11, Old Hall Street, LIVERPOOL, & 18, Exchange Street, MANCHESTER,

IMPORTERS AND DISTRIBUTORS OF

PETROLEUM PRODUCTS

THROUGHOUT NORTHERN AND MIDLAND DISTRICTS OF ENGLAND.

SPECIALITIES: All Grades of

GAS OILS MINERAL LUBRICATING OILS, PARAFFIN SCALE AND WAX, PETROLEUM SPIRIT, BENZOLINE AND BENZINE, SWANSDOWN WATER WHITE AMERICAN PETROLEUM.

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVII. (New Series.)

DECEMBER 21ST, 1907.

No. 414.

TO OUR READERS.

To our readers both at home and abroad, we extend with all sincerity best wishes for .



**A Merry Xmas and
A Happy New Year.**

Editorial Notes.

Petroleum Imports into the United Kingdom. The statistics published in our import list dealing with the petroleum import trade of the United Kingdom, though only made up to the middle of this month, enable one to arrive at a fairly accurate conclusion as to the trend of events in connection with this important branch of the industry. It is safe to now say that this year's imports will exceed those of last year, though only by a few million gallons. When the full returns are announced, it will be seen that American oil is more than holding its own in the United Kingdom, and the figures of shipments will be somewhere about 10,000,000 in excess of those for 1906. On the other hand, in spite of the steady revival in the Russian export trade, the United Kingdom has received less oil from the Caucasus than has been the case for years. The Dutch Indies have come to the front with amazing rapidity, the imports of benzine having increased from 14,000,000 gallons in 1907 to about 24,000,000 gallons this year. Roumania, too, is making progress upon this market, that country's imports to the United Kingdom of solar oil having almost doubled themselves in the twelve months. One peculiarly interesting feature of the total imports will be the fact that the consumption of illuminating oil, though making little headway, is not declining, for the total quantities imported for the present year will slightly exceed those of twelve months ago. What they would be if the economy of the use of that pure and safe light were only given its fair consideration by the public generally, is of course problematical, yet it is certain that the use of illuminating oil would be greatly increased, and this, to the benefit of all concerned—producers, distributors, and the consumers alike.

The Russian Home Oil Market. At the present time, the Russian oil market is in a very interesting stage. The price of kerosene at Nijni-Novgorod has suddenly advanced by 10 copecs per pood—to 137 copecs in bulk. There is no apparent reason for the rise, for the stocks of this

product are quite sufficient and now amount to over 2,200,000 poods as against 700,000 poods at the corresponding period of 1906. A partial explanation of this step may, however, be found in the firm tone of the Baku market both for crude and illuminating oil. The Baku oil people are developing their commercial policy, apparently without paying any heed to the conditions prevailing on the markets of the interior, taking no notice of the steady decline in the use of liquid fuel by railways and manufacturing industries. This attitude adopted by the Baku petroleum producers can only be explained by a confidence on their part that the sale of their output is fully guaranteed and there is no doubt in their minds that the high-priced products may be left on their hands. The manufacturers in the interior are considering the continuous advance of prices at Baku with the greatest equanimity, and are in no hurry to effect purchases of liquid fuel on the basis of Baku prices; the railways are making efforts to assure to themselves supplies of other fuels, and as far as possible free themselves from their dependence upon liquid fuel. Generally, the liquid fuel trade in the interior of Russia is very quiet.

A Promising British Oil Enterprise. The most pessimistic observer, after perusing the various speeches delivered at Wednesday's general meeting of the Commonwealth Oil Corporation, must be led to the conclusion that this influential company, which is opening up and turning to profitable account the rich and vast deposits of oil shale in Australia, gives every promise of great success. All that care and foresight could do in order to secure that success at the earliest possible moment, has been accomplished. The difficult task of building the railway in order that the transport of the products might be facilitated, is now an accomplished fact, and as Sir Lucas Booth, the Chairman of the Bank of New South Wales, pointed out, the pioneer work of the Company has within a comparatively short time changed wild uncivilised bush country into a busy scene of modern activity. It is impossible not to admire the pluck and energy shewn by the responsible heads of this great undertaking, nor to help wishing it the success which it truly deserves.

November in the American Oil Fields. The report of operations in the American fields during November records a general decline all round. Wells completed shew a decrease from the total of the previous month, while new production likewise displays a proportionate falling off. The decrease is mainly accounted for by lethargy in the Mid-Continent fields and the Lima-Indiana oil districts, for in Illinois and Pennsylvania the new production shews a slight gain. There was nothing, however, in the November developments to indicate any increase in the output of high grade oil, which for a

long time has been steadily declining. While there is no lack in the yield of crude petroleum of value for illuminating and fuel purposes, the output of oil, capable of furnishing the lighter products and which is rich in paraffin constituents, is not making any decided gains and, unless the unexpected happens, appears likely to be reduced to insignificant proportions. While the product of the Pennsylvania and Trenton rock oil fields is approaching the limits of exhaustion, the Illinois and Mid-Continent oil fields shew no indications of an immediate decline in their output. These sections have been helping to increase the surplus oil stocks in America to extraordinary proportions, and are by far the most important factors in the present oil developments. A production of 460,000 barrels of oil a day is given as the total yield of this country, and this is far in excess of the yield of all other countries in which oil is produced in commercial quantities.

DEATH OF MR. RICHARD SORGE.

It is with the deepest regret that we announce the sudden death of Mr. Richard Sorge, the well-known German petroleum engineer and specialist.

Mr. Sorge, who was born at Wettin-a.d.-Saale fifty-five years ago, was the son of a medical practitioner. He was educated at the Gymnasium in Berlin, where the studies included one year's course of practical engineering. After two years' study at the provincial industrial school at Potsdam, the Franco-German war broke out, and Mr. Sorge spent one year in the army as a volunteer in a Guards Fusilier regiment. After the close of the campaign, in which he earned the Iron Cross of the second class, Mr. Sorge entered the Royal

Industrial Academy, where he studied engineering for three years. Afterwards, he worked in the engineering offices of various firms until 1874, when he received and accepted an invitation to the post with Messrs. Lentz and Co., at Baku. This was the turning point in his career. Since that time Mr. Sorge worked exclusively in the petroleum industry, more particularly in the boring branch. In 1879 he visited the Galician oil fields on behalf of Messrs. Lentz, in order to study the conditions there. In 1881 he established a business of his own at Baku as boring contractor and engineer which he sold in 1899 at a good profit and then came back with his family to live in Germany. Later he devoted great attention to the rapidly developing Roumanian petroleum industry. Mr. Sorge was for a long time expert and confidential adviser to the Deutsche Bank on petroleum affairs. He was a convinced adherent of water flush drilling, and his scientific works on this subject are well known and appreciated.

ILLNESS OF MR. W. HENRY BURKE.

Our readers will regret to hear of the illness of Mr. W. Henry Burke, a prominent shareholder in the Russian Petroleum and Liquid Fuel Co., Ltd., the author of the interesting pamphlet upon that company's brilliant past, its present degradation, and its hopeful future. Mr. Burke has taken a foremost part in the agitation against the Company, and has displayed a keen desire to see its position improved for the benefit of the shareholders. Mr. Burke has now been removed to a nursing home where he is about to undergo a surgical operation. We are sure our readers will join with us in wishing him a speedy recovery.

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING NOVEMBER.

THE SHIPMENTS INTO VARIOUS PORTS.

The imports of petroleum and the various allied products into the different ports of the United Kingdom during November are published in the following table. In all, the month's imports amounted to 25,605,460 gallons, as against 28,774,650 gallons for October and

24,521,330 gallons for September. Lubricating oil shipments have considerably decreased during the past month to about one-half the volume they were in October, but, on the other hand, the imports of benzine have doubled. The table is as under:—

	Lubricating.	Illuminating.	Residuals.	Benzine.	Other Products	Fuel.	Gas.
Aberdeen	1,320	1,600	—	—	—	—	—
Barrow	—	383,040	—	1,537,950	—	—	—
Belfast	400	1,484,790	—	—	—	—	—
Bristol	177,830	1,076,840	—	—	—	—	125,980
Cardiff	3,370	540,000	—	—	—	—	—
Dublin	—	1,674,210	—	—	—	—	—
Dundee	240	240	—	—	—	—	—
Glasgow	278,010	—	—	—	4,000	—	—
Goole	1,560	—	—	—	—	—	—
Grangemouth	15,290	33,720	—	—	—	—	—
Grimsby	3,550	—	—	—	—	—	—
Hartlepool (West)	700	—	—	—	—	—	—
Harwich	140	—	—	—	—	—	—
Hull	157,230	2,340,120	—	—	8,440	—	—
Leith	61,540	28,070	—	—	—	—	—
Limerick	—	—	—	—	—	—	70
Liverpool	715,110	49,320	5,460	49,500	10,660	—	838,690
London	759,680	3,749,160	—	2,442,450	4,120	73,500	3,592,080
Manchester	733,870	1,080,000	—	—	17,870	—	—
Middlesboro'	1,800	—	—	—	—	—	—
Newcastle	15,390	—	—	—	—	—	—
Newport	180	—	—	—	—	—	—
Plymouth	240	1,168,990	—	—	—	—	—
South Shields	—	275,000	—	—	—	81,670	—
Swansea	520	—	—	—	—	—	—
Totals	2,927,970	13,885,100	5,460	4,029,900	45,040	155,170	4,556,820

THE AURORA COMPANY OF ROUMANIA.

ITS HISTORY AND OPERATIONS.

The history of the Aurora Co. of Roumania forms an interesting chapter in the developments of that country's petroleum industry. It was formed in 1898 at Ploesti as a private company, with a capital of 150,000 francs, to work a petroleum refinery. The founders of the company were: G. G. Ionescu, Al. Radovici, Max I. Schapira, G. C. Dobrescu, Stan Vasilescu, I. Nicolescu-Bazar, I. Gheorghin, Christecu Bros. and I. Diamandescu. All these gentlemen were also proprietors of the firm, Nouvelle Conduite Roumaine, owning a pipe line between Bustenari, Baicoi and Baicoi station, which carried the oil of these partners from Bustenari to Baicoi station.

The object of the company was the establishment of a refinery near Baicoi station to treat, in the first place, the crude oil produced at Bustenari by the partners, and in the second place to buy crude oil for treatment from other producers. The development which took place in the business of these two companies attracted the attention of foreign capitalists, and in 1899, a group of Dutch capitalists represented by Mr. Fritz Olie and Mr. I. W. de Beer, of Hilversum, and who in that year established the International Roumanian Co., of Amsterdam, for the production of crude oil decided to acquire as an interest in the above-

mentioned enterprises, and by an amalgamation of the two companies mentioned above was formed the Aurora Co. in its present form, with a nominal capital of 6,500,000 francs, of which, 3,250,000 francs has been fully paid up, and with its registered office at Bucarest.

The International Roumanian Petroleum Co., of Amsterdam, being interested in the crude oil production in the Dambovitza district and the Baicoi refinery being occupied with the refinery of oil from the Prahova fields, the purchase was effected in the same year, 1899, of the refinery of Mr. N. Th. Rucareanu, situated at Colanu, near Tergoviste.

The reconstruction of these refineries and their enlargement in proportion to the rapid growth of the crude oil production in Roumania, the provision of sufficient quantity of transport material in the form of tank waggons, formed the chief subject of preoccupation of the directors of the company. In 1902 the directors, by reason of the increased output of the company's refineries and the pressing need of giving a durable basis to the company's continuously growing export trade, decided to commence the construction at the port of Braila, on the Danube, of an export installation which

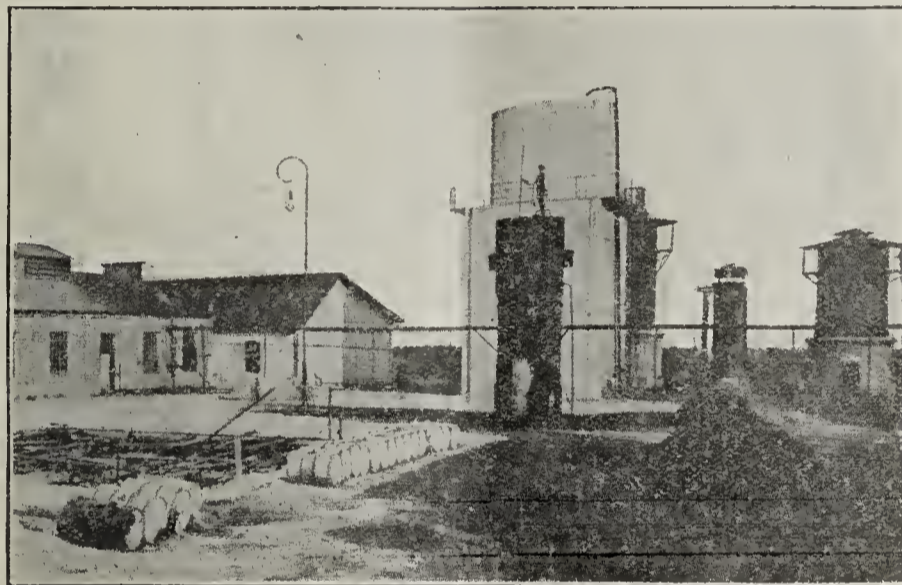
was completed in four months, so that towards the end of May, 1903, the first tank steamer, the "Rocklight," took a cargo of illuminating oil for England.

This installation, consisting of tanks of an aggregate capacity of 11,500 tons, and including a tank barge of 1,500 tons carrying capacity, large diameter pipe lines, railway sidings and all necessary plant, passed towards the end of 1905 into the possession of the Credit Petrolifer, the company reserving to itself the right of partly using the installation.

In view of the continued growth of the exports to the west of Europe the directors last year decided to lease for a long period two of the tanks which the Government had erected at Constantza, and of which the company began to make use of this year.

The geographical position of Roumania has indicated to the directors another important outlet for the products

of the company, *i.e.*, Bulgaria, European Turkey and Asia Minor. The development of the export trade in this direction was rather difficult and slow, which is due to the special conditions of the petroleum trade in those countries and the overwhelming predominance of Russian oil there until quite recently. The first step towards the introduction of the company's products in the East was the



A CORNER OF ONE OF THE AMORA REFINERIES.

erection of a dépôt at Roustchouk in 1903, containing tanks of an aggregate capacity of 1,500 tons, for storing oil delivered by railway to Guirgevo and carried across the Danube in the tank boat "Aurora," warehouses and sheds for filling and soldering cans and packing in cases, which are obtained locally.

The following pipe lines are owned by the company:—

(a) Pipe line, two-inch diameter and 18½ kilometres long, from Bustenari *via* Mislea and Baicoi, to the refinery; capable of delivering 150 tons per 24 hours.

(b) Pipe line, three-inch diameter and 16 kilometres long, following the route: Bustenari-Magureni-Floresti-Baicoi refinery; capacity 300 tons per 24 hours.

In connection with these pipe lines the company has receiving tanks for crude of a capacity of 3,000 tons, pumping stations at Bustenari and Doftanetz (in construction), and other places.

The quantities of crude oil pumped through these pipe lines are given below (in tons):—

From November 18th to April 30th, 1900	..	10,515
Year ended 1901	..	27,081
Eight months ended December 31st, 1901	..	26,956
Year 1902	..	50,607
Six months June 30th, 1903	..	24,638
Year 1904	..	89,777
" 1905	..	94,007
" 1906	..	80,408
" 1907	..	57,149
Total .. .. .	..	461,138

The refinery at Baicoi station was erected in 1898 with a distilling capacity of 60 tons of oil per 24 hours. Now, the refinery reconstructed and equipped with the most perfect plant can treat 800 and 900 tons of oil per day.

The refinery is supplied with crude oil from the wells of the International Co. at Bustenari, the wells of the Regatul Roman Co. at Moreni and Baicoi, also from various other producers at Bustenari and Baicoi.

The refinery is equipped with a continuous distillation system, benzine rectifying plant, special plant for the manufacture of lubricating oils, storage tanks, etc.

The refinery is connected with Baicoi station by means of a line of railway one and a-half kilometres long and branch lines within the grounds of the refinery.

The following are the quantities of crude oil distilled at the refinery since its construction up to June 30th, 1907:—

	Tons.
From November 18th to April 30th, 1900	5,304
Year ended " " 1901	16,247
Eight months ended December 31st, 1901	24,685
Year " " 1902	32,163
Six months " June 30th, 1903	16,072
Year " " 1904	60,356
" " " 1905	97,634
" " " 1906	128,802
" " " 1907	132,409
Total	513,572

The following table gives the quantities of various products delivered from this refinery for home consumption:—

	Illuminating Oil. Tons.	Benzine. Tons.	Re-siduals. Tons.	Lub. & Gas Oils. Tons.
From Nov. 18 to April 30, 1900	1,367	—	2,164	—
Year ended " " 1901	2,496	66	10,845	—
8 months ended Dec. 31, 1901	1,605	22	14,006	9
Year " " 1902	2,222	65	25,233	18
6 months " June 30, 1903	1,621	40	9,991	89
Year " " 1904	2,801	96	32,962	—
" " " 1905	713	73	49,730	25
" " " 1906	3,928	90	71,550	203
" " " 1907	910	240	66,323	198
Total	17,663	692	282,804	542

The quantities delivered from the refinery for export were:—

	Illuminating Oil. Tons.	Benzine. Tons.	Re-siduals. Tons.	Lub. & Gas Oils. Tons.
From Nov. 18 to April 30, 1900	—	228	—	—
Year ended " " 1901	36	2,250	—	—
8 months ended Dec. 31, 1901	60	3,351	—	—
Year " " 1902	1,072	5,180	—	—
6 months " June 30, 1903	4,566	2,141	—	634
Year " " 1904	12,111	8,648	—	725
" " " 1905	24,754	14,730	—	—
" " " 1906	38,604	15,633	5,926	—
" " " 1907	48,326	15,482	4,245	3,301
Total	129,528	67,641	10,171	4,660

This refinery near Tergoviste situated at the village of Colanu, in Dambovitza, was completely rebuilt and adapted to distil 150 tons of oil per 24 hours. The modern installation for the manufacture of all kinds of lubricating oils was completed this year.

The following are the quantities of oil treated at this refinery since the formation of the company:—

	Tons.
From November 18th to April 30th, 1900	522
Year ended " " 1901	2,915
Eight months ended December 31st, 1901	4,079
Year " " 1902	7,534
Six months " June 30th, 1903	4,396
Year " " 1904	13,046
" " " 1905	19,872
" " " 1906	24,013
" " " 1907	34,207
Total	110,584

The following are the quantities of various products delivered from this refinery for the Roumanian home trade:—

	Illuminating Oil. Tons.	Benzine. Tons.	Re-siduals. Tons.	Lub. Oil. Tons.
Nov. 18, 1899, to June 30, 1903	3,010	30	6,825	1,438
Year ended " " 1904	2,859	—	8,358	529
" " " 1905	2,629	—	10,284	536
" " " 1906	3,228	—	15,376	996
" " " 1907	2,475	126	13,306	1,002
Total	14,201	156	54,149	4,501

The quantities of oils delivered by this refinery for export purposes were:—

	Illuminating Oil. Tons.	Benzine. Tons.	Re-siduals. Tons.	Lub. Oils. Tons.
Nov. 18, 1899, to June 30, 1903	—	1,303	—	—
Year ended " " 1904	845	679	—	—
" " " 1905	1,779	1,464	194	9
" " " 1906	3,160	1,908	200	181
" " " 1907	4,657	3,520	228	1,158
Total	10,441	8,874	622	1,348

This refinery obtains its supply of crude oil from the wells at Gura Ocnitza and Moreni (owned respectively by the International Co. and Messrs. Pleyte and Co.) by means of a pipe line of two-inch diameter and 12½ kilometres long. The products are pumped to Tergoviste railway.

THE PACIFIC OILFIELDS, LIMITED.

The statutory meeting of the Pacific Oilfields, Ltd., was held on Friday week, at Winchester House, London, E.C. Mr. Alexander Balfour Williamson presided, and stated that the properties to be acquired were in course of being legally transferred to the company in California, and their agents were now in actual possession of the property. The company was not authorised to commence operations until October 7th last; but since that time work has been proceeded with without any hindrance. The agents of the company, after consultation with the board, decided to devote their attention to the development of the Dorn property. It had been decided to drill a well on the McCabe land, and the necessary timber and casing had been ordered. There being no resolution before the meeting, the proceedings terminated.

SPOUTER AT ANAPA.

The *Trade and Industry Gazette* publishes the following telegram from Ekaherinodar, dated November 29th:—

On a plot belonging to Cossack army lands, in the district of Suvorovsko-Tcherkessky Settlement, 20 versts from Anapa, where on the property of Count Kaukrm petroleum in small quantity has been produced for two years, on November 26th and 27th, well No. 10, after being deepened, was spouting at intervals of 5-6 hours, to a height of 70 ft., yielding each time up to 150 poods of oil. The well has 8-inch casing. So far, only the first oil stratum has been reached. A pipe line has been laid to Anapa Bay.

THE OKLAHOMA OIL FIELDS.

PROF. GOULD SAYS THE DEVELOPMENT IS YET IN ITS INFANCY.

According to Prof. Charles N. Gould, of the Department of Geology at the Oklahoma State University, Norman, Okla., the development of the Oklahoma oil fields is yet in its infancy. Prof. Gould has spent several years in the field, investigating conditions not only in the country already developed, but in the region south of the localities in which oil and gas have been found.

As a result of his investigation he states that practically all of the oil and gas so far found in Oklahoma has come from three well marked anticline folds, which extend approximately north and south. Of these folds the one farthest east extends along the Verdigris river for a distance of 20 miles or more. Oil and gas have been found at Coody's Bluff, Alluwe and near Chelsea. This region is known as the shallow oil district, the average depth of the wells being 600 feet.

The largest and most productive anticline so far developed extends from the Kansas line south through the fields at or near Copan, Dewey, Bartlesville, Ramona, Tulsa, Red Fork, as far as the new famous Glenn pool. The southern extension of this anticline has not yet been located.

The third anticline occurs near Cleveland, Okla., and has been developed in but one rather small locality. It is believed, however, that the Cleveland anticline extends for a number of miles farther south and that productive fields eventually will be found in that region.

From his observation in the field, Prof. Gould is inclined to the belief that at the present time only a very small part of the future productive field has been prospected and a much smaller part developed. He found that in the region south and south-east of the present development there are a number of well marked anticline folds having the same general structure and stratigraphy as the folds in the country where oil and gas have been found in the northern part of the State. So far no wells have been drilled in any of these folds, but there is reason to believe that a number of oil pools, some of which will rival the famous Bartlesville, Cleveland and Glenn pools, will be found.

THE NIGERIA BITUMEN CORPORATION, LTD.

The second ordinary general meeting of this corporation was recently held in London, when the report was adopted on the motion of Mr. J. S. Bergheim, who presided. Sir Boverton Redwood, in addressing the shareholders, emphasised the importance of liquid fuel. Experience had shewn the very great superiority of petroleum over coal as a source of power in steam-raising, in internal combustion engines, and in other ways; and in respect of the control of supplies of petroleum this country did not occupy at all an enviable position. We had, it is true, a conspicuous exception in the case of Burma, where an exceedingly important petroleum industry was now being built up by British capital and energy, and it was an illustration of what might be done in some other parts of the world over which the British flag flew. The work the company were engaged on was essentially one of investigation—the discovery of the answer to the question as to whether there was not in Nigeria a commercial source of petroleum. He was able from personal knowledge and experience to confirm what the report said with respect to certain marked similarities between the conditions existing on the company's properties in Nigeria and those which existed in California.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended December 7th was 230,000 poods, or 3,708 tons (work was stopped on Thursday and part of Friday by general political strike at Baku); and for the week ended December 14th was 315,000 poods, or 5,079 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended December 8th was 228,000 poods, or 3,676 tons (production for six days only, owing to strike of workmen on December 5th); and for the week ended December 15th was 273,000 poods, or 4,401 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 8th December was 121,970 poods, or 1,957 tons; and for the week ended 15th December, 135,975 poods, or 2,193 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 8th December was 119,756 poods, or 1,931 tons (one day's strike); and for the week ended 15th December was 143,144 poods, or 2,308 tons.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO DECEMBER 16th, 1907.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Dec. 2.	From Jan. 1.	Since Dec. 2.	From Jan. 1.	Since Dec. 2.	From Jan. 1.	Since Dec. 2.	From Jan. 1.	Since Dec. 2.	From Jan. 1.	Since Dec. 2.	From Jan. 1.	Since Dec. 2.	From Jan. 1.	Since Dec. 2.	From Jan. 1.
Austria ...	—	—	—	84,240	—	67,770	—	—	—	—	—	—	—	—	—	152,010
Belgium ...	440	153,850	43,776	719,091	—	—	—	310	—	4,120	—	—	—	860	44,216	878,231
Canada ...	—	—	—	—	—	8,800	—	—	—	—	—	—	—	—	—	8,800
Dutch India.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23,315,230
Germany ...	77,322	2,878,547	68,371	1,402,041	—	2,000	—	70	—	23,241,730	—	73,500	—	5,140	145,693	4,287,878
Holland ...	—	1,070	1,200	27,950	—	—	—	—	—	591,330	81,670	163,340	15,840	138,110	98,710	921,800
Roumania ...	—	7,039,290	—	—	—	—	—	7,307,490	—	1,459,000	—	238,700	—	—	—	16,044,480
Russia ...	—	28,509,200	9,280	3,848,350	—	125,960	—	887,040	—	321,690	—	—	1,423,780	—	9,280	35,116,020
U.S.A. ...	2,513,870	100,937,417	1,003,353	38,159,828	—	860,120	—	48,550,410	1,744,310	7,216,642	—	5,677,570	28,560	1,856,920	5,290,093	203,258,907
Other Countries	—	950	620	80,565	—	4,760	—	—	—	2,500	—	40	—	140,320	620	229,135
	2,591,632	139,520,324	1,126,600	44,327,065	—	1,069,410	—	56,745,320	1,744,310	32,837,092	81,670	6,153,150	44,400	3,565,130	5,588,612	284,212,491

THE OUTPUT OF THE ROUMANIAN REFINERIES.

STATISTICS FOR THE FINANCIAL YEAR 1906-1907.

The Petroleum Bureau of the Roumanian Ministry of Finance, which is under the direction of Mr. D. Dobrescu, has just published a report upon the operations of the Roumanian petroleum refineries during the fiscal year ended 31st March, 1907.

The following table gives the quantities of crude oil delivered to the refineries for treatment and the quantities of products obtained. The total number of refineries is 68, but of these only 14 are of sufficient importance to be dealt with separately.

ULTIMATE PRODUCTS OBTAINED FROM THE CRUDE OIL AFTER REFINING AND REDISTILLATION.

Firm.	Locality.	Quantity of Crude Oil Treated.	Benzine.		Illuminating Oil and Distillate.		Lubricating Oil.		Paraffin.		Residuals.		Loss in Distilling and Refining.
			Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.	
Steaua Romana ..	Campina ..	301,377	39,199	13'00	93,571	31'05	31,097	10'32	433	0'14	126,439	41'95	3'54
Aurora Co. ..	Baicoi ..	118,594	12,428	10'47	33,689	28'40	4,780	4'03	—	—	62,803	52'95	4'15
Vega Co. ..	Ploesti ..	112,872	17,491	15'49	38,576	34'17	2,936	2'60	—	—	51,955	46'00	1'74
Romano-American Co. ..	" ..	65,060	8,714	13'39	22,483	34'55	2,757	4'23	—	—	25,947	39'88	7'95
Trajan Co. ..	Cernavoda ..	40,778	6,175	15'14	13,045	31'99	1,665	4'08	16	0'03	18,484	45'32	3'44
Aurora ..	Targoviste ..	31,893	3,041	9'54	7,794	24'43	1,834	5'75	—	—	17,165	53'82	6'46
Aquila Franco-Romana ..	Ploeni ..	30,693	3,441	11'21	10,350	32'72	681	2'22	—	—	14,479	47'18	5'67
Astra Co. ..	Ploesti ..	23,342	3,668	15'71	8,485	36'35	—	—	—	—	10,402	44'56	3'38
M. Campeanu ..	Targoviste ..	11,441	1,060	9'21	3,733	32'70	549	4'81	26	0'22	4,754	41'55	11'51
I. Grigorescu ..	" ..	4,966	594	11'98	1,562	29'45	—	—	—	—	2,521	50'77	7'80
S. Parascheva ..	Ploesti ..	2,819	559	19'82	709	27'26	—	—	—	—	1,407	49'89	3'03
Dr. D. Goldstern ..	Baneasa ..	2,861	329	11'49	885	30'92	215	7'52	—	—	1,376	48'09	1'98
M. Predinger ..	Ploesti ..	2,394	302	12'60	884	36'96	4	0'19	—	—	1,066	44'53	5'72
M. Mitrafi ..	" ..	1,346	—	—	—	—	—	—	—	—	—	—	—
Other Refineries ..	Various ..	12,861	602	4'66	5,856	45'54	724	5'63	124	0'96	4,137	32'17	11'04
Total ..	..	763,297	97,825	12'82	242,062	31'71	47,261	6'19	599	0'78	343,545	43'69	4'81

It is interesting to note the variation in the percentage of products obtained by the various refineries, which is due either to the equipment of the installations, the methods of working or the quality of crude oil treated at each refinery.

The average percentage of various products obtained at all the refineries was as follows, the loss in distilling and refining being 4'81 per cent. :—

	Per cent.
Benzine	12'82
Illuminating Oil and Distillate	31'71
Lubricating Oils	6'19
Residuals	43'69
Paraffin Scale	0'78
	95'19

The various products supplied during the year under review for home consumption were (in tons) :—

Firms.	Situation.	Benzine.		Illuminating Oil.	Lubricating Oils.	Residuals and Other Products.	
		Dutiable.	Non-Dutiable (for motors denatured.)			Sold.	Used as Fuel at Refineries.
Steaua Romana ..	Campina ..	130	1,191	5,791	50	93,712	55,450
Aurora ..	Baicoi ..	2	121	719	11	57,993	8,571
Vega ..	Ploesti ..	5	95	3,481	—	42,952	8,539
Romano-American Co. ..	" ..	—	—	851	6	14,071	12,674
Trajan ..	Cernavoda ..	21	115	1,829	222	6,404	5,698
Aurora ..	Targoviste ..	—	3	2,609	938	12,424	4,333
Aquila Franco-Romana ..	Ploeni ..	—	440	1,718	682	10,584	3,551
Astra ..	Ploesti ..	1	18	1,004	—	8,829	1,588
M. Campeanu ..	Targoviste ..	15	136	2,517	414	2,723	1,911
I. Grigorescu ..	" ..	1	17	1,483	4	1,880	629
S. Parascheva ..	Ploesti ..	—	25	830	—	1,295	215
Dr. D. Goldstern ..	Baneasa ..	10	287	861	197	335	623
M. Predinger ..	Ploesti ..	3	22	657	4	846	218
M. Mitrafi ..	" ..	—	1	369	17	476	180
Other Refineries ..	Various ..	392	1,022	10,839	2,790	12,448	3,180
Total ..	..	580	3,493	35,558	5,335	266,982	107,360

The quantities of products delivered by the various refineries to the export depôts at Constantza, Braila

and Guirgevo, and of products exported through other frontier stations, were as under :—

Firm.	Situation.	Benzine.	Illuminating Oil.		Lubricating Oil.	Residuals.
			Distillate.	Refined.		
Steaua Romana	Campina	35,672	11,390	60,664	21,678	17
Aurora	Baicoi	11,909	16,031	15,626	4,380	157
Vega	Ploesti	13,508	4,066	32,929	1,512	7,526
Romana American Co.	"	15,958	—	20,598	42	1,530
Trajan	Cernavoda	4,714	—	12,845	784	2,852
Aurora	Targoviste	2,734	—	4,613	992	—
Aquila Franco-Romana	Ploeni	3,344	4,232	1,290	—	—
Astra	Ploesti	2,249	—	7,163	—	—
M. Campeanu	Targoviste	972	—	1,048	—	—
Dr. D. Goldstern	Baneasa	117	—	—	—	—
M. Predinger	Ploesti	172	—	—	—	—
Other Refineries	Various	67	—	—	17	265
Total .. .. .	.. .. .	92,347	35,719	156,776	29,495	12,347

CORRESPONDENCE.

THE NAVY AND THE USE OF OIL FUEL.

A POINTED LETTER FROM MR. J. J. KERMODE.

To the Editor of the PETROLEUM REVIEW.

SIR,—In the November number of the *Navy League Journal* there appears an article which seems to question the soundness of the policy of the adoption of oil fuel for the use of ships of the British navy. It is true that at the moment a system of burning oil fuel has been adopted by the British Admiralty, which is distinctly valuable in the case of torpedo boat destroyers where space is limited, and when every part of the installation must needs be as small and light as possible, but it is abundantly evident that the Admiralty lack a full grasp of the subject, and have for the moment adopted a single plan, and with this plan provision has to be made for oil fuel to be the sole fuel, as it is not possible to alter the boilers readily for the use of coal, and this alarms the writer of the article referred to. It is not essential, however, that the use of coal should be abandoned in vessels of a type different and larger than a torpedo boat destroyer, as it is easy to make suitable provision to work with either coal or oil fuel, and that, too, at almost a moment's notice.

In 1902 I conducted (on behalf of my firm) at the instance of the Admiralty a series of trials with oil fuel on H.M.S. "Surly" (destroyer), and the conditions laid down were such that we were obliged to make an arrangement whereby coal could be reverted to at any moment. These conditions we accepted, and the results were completely successful.

Our trials on the "Surly" still stand as a record in steaming, although the boiler and the conditions did not lend themselves to a record performance, and it is regrettable (so far as we are concerned) that the facts were not permitted to be published at the time.

Twice prior to 1902, adverse reports on the use of oil fuel for warships were presented to the Admiralty by their responsible officials, and much unbelief was expressed to me at the time of our trials that we would accomplish the full power under the conditions which prevailed, but not only were the trials successful, but no trial since has proved relatively so successful. This was the first time full power had been obtained with oil fuel on a war vessel under service conditions, and under the conditions which rendered the boiler immediately available for the use of coal if desired.

The experience gained at these trials enabled me to determine with exactness all the factors which were necessary to arrive at a complete and satisfactory solution of the problem of firing ships of war with oil fuel.

The outcome of this was that in 1903 we submitted a new arrangement to the British Admiralty, and although we were not engaged to demonstrate the possibilities of this arrangement, it seems very evident from the illustrations shewing the "Mohawk's" arrangement that our 1903 plan with possible modifications has been adopted for British war ships.

The plan adopted for torpedo craft demands the exclusive use of oil fuel, but this is capable of modification to facilitate the use of coal if desired, but certain sacrifices would have to be made in favour of weight and space. The restrictive conditions which apply to torpedo craft does not apply to ships of a heavier class, with the result that it is comparatively easy to supply an arrangement which will facilitate the use of either coal or oil fuel on the larger vessels, and there need be no question of alteration of furnaces to admit of this being done. A modification of the system we used on the "Surly" might easily be fitted to vessels of the cruiser and battleship classes, and this change would not only prevent what the writer fears, but it would render all war ships more efficient than at present, as they would be able to handle either coal or oil fuel at will. Any provision that can be made to increase the range of action of a war vessel without altering her displacement, and at the same time have the effect of reducing the number of her crew by reason of automatic stoking, is surely one that the Admiralty is bound to consider. Another matter for consideration is that of smokeless combustion, and that is highly important in war time.

Coal (even the best) gives off smoke, and the tell-tale column issuing from the funnels of a coal-fired war ship enables her position to be easily denoted. With oil fuel this does not need to occur, as it is reasonably easy to effect perfect combustion, even at full power.

Having the experience with oil fuel that I have, I am convinced of the soundness of the policy pursued by the Admiralty, and we should possess as many oil storage tanks as we have coal depôts, and for the various units of our Navy to be in the happy position to use either oil fuel or coal as occasion or circumstances demand, will prove a further means of preserving our supremacy on the sea.

I am certain that coal has to be sent to the West Indies from this country for the use of merchant marine and war ships alike, and I am equally certain that valuable oil fields are to be found in Trinidad.

Texas, California, Canada, Mexico, Borneo, Burmah, India, and Chili all afford oil fuel at present, and these sources could all be drawn upon by the various ships which happened to be near any of these places in time of war. I have purposely omitted the Caucasian and Roumanian oil fields, and it is too early to speak of the possibilities of British West Africa, where I understand abundant oil is to be found.

It is quite certain that too much reliance is being placed on coal, and most engineering firms construct boilers which are designed as if another and better fuel was not in existence. Some of the many advantages of oil fuel, if adopted for our largest Atlantic liners, are set forth by me in a letter which appeared in *Engineering* of November 29th, 1907, and in which I state that if oil fuel was used on the Cunarder "Lusitania," the fire room "crowd" would be reduced from 312 to 27 hands, and these would accomplish greater things than the whole army of stokers and trimmers, who are now rendered necessary with coal.

In the case of the "Lusitania," 4,000 tons of extra cargo and quite 250 additional passengers could be carried if oil took the place of coal. Nor is this all, for the absolute cleanliness of the boiler tubes, the absence of smoke, and the continuous and regular operation of the fires would reduce the voyage by at least eight hours between Queenstown and New York.

Even on board a man-of-war exact refinement of stoking is impossible with coal, as coal is not all alike, and firemen are sometimes inefficient. The necessary operation of burning down and cleaning fires which the use of coal demands for continuous steaming is another source of loss of power, and the deposition of soot and other matter in the boiler tubes of a ship like the "Lusitania" accounts for a loss of quite 10,000 indicated horse-power every four hours.

The writer shews considerable concern that we should rely even to a slight extent upon a fuel which is brought to us over-sea, but we are not in a worse plight as regards this than in the matter of foodstuffs, and there is this other fact which he has overlooked—we do not keep all the ships of the British navy at home, and on many distant stations oil fuel is not only superior to coal, but it is more easily obtained and at a less cost, therefore it becomes expedient in the interests of efficiency and economy to use oil fuel wherever it is easily and cheaply obtainable.

It is true that the exclusive or partial use of oil fuel would involve certain structural alterations, but these would present no difficulty. Oil fuel would be carried in the double bottom, and the existing coal bunkers could be retained.

The one other consideration which calls for remark is the fear expressed by the writer in the *Navy League Journal* of the risk of setting fire to the oil fuel, which he states would be a new and ever-present danger scarcely conducive to confidence and fighting efficiency. To this I reply, that this danger does not exist at all in fact, but a false impression as to the danger accompanying the use of oil fuel does exist in the minds of the general public. Oil fuel is as safe as coal, as the oil fuel used in war ships has a very high flash point, and it is difficult to ignite it. I have frequently exploded the doubts of people as to the safety of oil fuel by slowly plunging a lighted torch into a bucket filled with oil fuel, and by this means very effectually extinguishing the flame of the torch. What man-o'-war's man ever sleeps the less soundly by reason of his knowledge that the magazines contain all the elements of risk to which the writer alludes. Wet coal, badly stowed, is a greater menace on board ship than either gun-cotton or oil fuel. In the case of wet coal you may easily have spontaneous combustion occur, whilst in the case of explosives or oil fuel one is pretty certain to find them always in a safe and normal condition in the receptacles which have been provided for each.

In conclusion, I would say that whilst the Navy League is playing its important part holding a watching "brief" for all that concerns the navy, and endeavouring as far as possible to bring about a condition of things which will render our first line of defence safe, our manufacturers

and shipowners are slow to adopt any and every fuel or appliance which will assist us as a nation in the more peaceful war of commerce. Is it too much to ask that whilst studying the needs of the arts of war, we should not neglect to study everything that will give us a legitimate and peaceful advantage in the arts of peace?

How many shipowners know that it is cheaper to fire their ships with oil fuel than with coal anywhere east of Suez? Is it unreasonable to bunker with cheap oil fuel 10,000 miles away from these shores and to carry sufficient to enable the vessel to return to the source of her cheap supply, or is it commercially sound to send Cardiff and Newcastle coal all over the world to various depôts to meet the needs of British ships at considerable cost, and sometimes at an inflated price?

How is it that the majority of people in these islands always argue a case of this kind as if they entirely forgot our possessions overseas, and are entirely persuaded that all our stores of whatever kind for the use of the navy should be shipped from home? Most colonials buy their clothes in the colonies, but should they chance to visit London no doubt they would purchase as their needs demanded there.

To send every requisite to naval ships on the China Station or on the Pacific Station when cheaper and better can be obtained locally is not a sound policy.

The introduction of oil fuel to the navy makes for speed, for a wider range of action, its use will reduce the number of stokers, and these could be added to the fighting strength, it will lighten the task of the stokers, it will remove the smoke column which is so menacing a thing for a war ship, and the fuel will keep without serious deterioration (in any climate) for an indefinite period. Ships may be bunkered at sea in heavy weather as easily as in a calm—a suitable hose connection between ships and the employment of a suitable steam driven oil pump will do more work in one hour than the whole company of a battleship can accomplish (working their hardest) when taking in coal under the most favourable conditions either in dock or in a roadstead.

The adoption of the motor boat for naval needs is also a step in the right direction, and everything which will make for alertness and readiness to act on a moment's notice, speed, and efficiency, must be considered essentially valuable to our first line of defence.

The methods of the Admiralty may sometimes be slow, and its methods of dealing with contractors may not always be appreciated or understood by the contractors, but this must be said: the world is ready to copy the example of the British Admiralty, and that is a sufficient token that the general policy upon which it acts must be sound.

British warships, as I know them, appear to me to be the best in the world, both in construction, equipment, and *personnel*, and to me, it appears the gravest concern of the Navy League should not be occasioned by the navy, but by the manning question and other matters connected with the merchant marine.

Under the head of by-products, many hydrocarbons can be classed as oil fuel, and much that is now treated as being of little value would, if used as oil fuel, revolutionise many an industry in these islands.

Yours faithfully,

Imperial Chambers,
62, Dale Street,

J. J. KERMODE,
M.I. Mech. E.

Liverpool, 16th December, 1907.

THE RUSSIAN PETROLEUM AND LIQUID FUEL COMPANY, LIMITED.

THE DIRECTORS CARRY THEIR RESOLUTION BY A DESPICABLE TRICK.

On Tuesday of last week the preference shareholders of the Russian Petroleum and Liquid Fuel Co., Ltd., were again called together at Winchester House, E.C., for the purpose of considering and, if thought fit, passing, with or without modification, the subjoined extraordinary resolution which they rejected a few days previously:—"That the board be, and it hereby is, empowered to apply from the investments of the preference shareholders' reserve fund any sum required, not exceeding £52,500, to the redemption of first debentures on or before January 1st, 1908, upon the terms that any sum so borrowed from the preference shareholders' reserve fund will have a first claim for repayment, with interest at 6 per cent. per annum, in priority to any distribution on the ordinary shares." The HON. EVELYN HUBBARD (chairman of the company) presided, and in formally moving the resolution above quoted, said that since the last meeting the board had received a large addition of proxies from shareholders who had previously refrained from voting, while a considerable number had transferred their proxies to them which had hitherto been given to the opposition. More than one of those had expressly stated in their letters that they were convinced that the measures proposed by the board were the only practical way of meeting the financial difficulty, and so had decided to support it, while reserving their full right of criticism upon other matters. That was all the board asked. At the present time the board were engaged in negotiations which had for their object the giving of the company an entirely fresh start on a new basis, which included the bringing in of fresh technical knowledge as well as the provision of working capital adequate for the thorough exploitation of the property. It would be their desire to give the shareholders the option of participating in the necessary financial arrangements. It would of course make all the difference in the world to the outcome of their negotiations whether they could speak as representatives of a going concern, or whether they found themselves forced into the acceptance of any terms that might be proposed to them to avoid impending liquidation.

Mr. OGILVY seconded the resolution.

Mr. A. L. LEVER, M.P., said he did not intend to detain the meeting many minutes, because he came to that meeting with the idea of affecting a compromise with the board, and he had drawn out lines which he thought would have been equitable to all parties. From information, however, which had now come to him he felt himself compelled to resist any settlement, because it was inferred by the communications of the chairman and others that he and his friends were seeking seats on the board. This was diametrically opposed to their wishes, and had been all along, and he was prepared at the present moment to accept the suggestion of the chairman, providing he gave them a committee of investigation or a committee of an advisory nature. He had consulted financial people in the City and found that it was absolutely impossible to raise more capital, but if they had a new board or the nucleus of a fresh board, there would be little or no difficulty in raising the money on fair and equitable terms. In his opinion the mode of procedure adopted by the board was absolutely of a most derogatory nature. Although he had been prepared to come to a settlement, he could not do so in the face of the letter which had been sent out by the secretary of the company, presumably on the authority of the board to the following effect: "The directors notice that your proxy has been lodged in favour of Messrs. Lever and others. There is yet time for you to reconsider your decision, and the directors earnestly ask you to withdraw your proxy, and, if possible, to attend the meeting on the 10th inst., to hear for yourself the position which has been so clearly set out in the recent circulars from the board. The question of management is at the present juncture entirely a side issue. The directors have promised that this shall be considered later, should the shareholders so wish. Will you please, therefore, send me a telegram in the morning withdrawing your proxy, and so help the directors to save your property from passing into the hands and control of the debenture holders."

He unhesitatingly said that that was not cricket; it was not playing the game, but was the most despicable thing he had ever come across in the whole of his career. Now, if the company went into the hands of a receiver, it did not mean that the shareholders would lose it, but simply that it would be managed by the receiver for the benefit of the company. The debenture holders could only take what was due to them, and as soon as they were

paid the undertaking would be handed back to the company; but on the appointment of a receiver the board was moribund at once. The chairman had told the meeting what the investments were, so far as £40,000 was concerned; but he did not know what they were worth. The rest was made up of Mr. Schumacher's investments. He was quite aware that the chairman gave details of those at the private meeting, but, personally, he did not want information privately; he wanted it given for the benefit of the shareholders generally. He therefore thought it was only right that the chairman should enumerate the investments which were held under the Schumacher Trust, or whatever it might be, and if they were realisable, it would be a very good means of obtaining the money that was required. They were enumerated some three or four years ago, and why they had been omitted from the past few balance sheets was a perfect mystery to him. What they wanted was a committee. They were prepared for this money to be handed to the directors, because they believed it was a *modus operandi* which might be of advantage to the company, provided the management was altered—they were prepared to do this if a committee were appointed. He did not ask for a committee of investigation, because when the word "investigation" was used there was always the fear of revelations. They did not want to hark back upon the past, but to study the present condition of the company and what was to be done for its future prosperity. Unless those terms were agreed to, he and his friends would have to demand a poll and record their votes against the resolution, and he hoped they would defeat it.

Mr. LEA SMITH thought the preference shareholders had better give up £52,000 rather than £132,000. As an independent shareholder who had given a large sum of money for his shares, he hoped the proposal before the meeting would be agreed to, for the shareholders could still maintain their right to go on with the agitation in future if they thought the company was badly managed.

Mr. W. H. BURKE congratulated the chairman upon the brevity of his speech. The great point which he had made was that if the shareholders refused to give the money the board desired they would wreck the company by their action, and so in that manner the chairman stigmatised those opposed to the proposal as wreckers. For his own part, his shares were bought at boom prices and cost him considerably more than £3,000. His (the speaker's) colleagues had also large investments, and so he would put it to the meeting, was it likely that they, having an interest of between £15,000 and £20,000, were going to take up a position simply to wreck the company. What would they benefit if they wrecked it? The directors had suggested that if the resolutions were not passed, the business would go into the hands of the debenture holders. He would say that the sooner it did so the better, because the shareholders could not be worse off than they were at present. A trustee for the debenture holders could have no object whatever in wrecking the company; what he would want would be to get his capital back, and if he could see that the company could be placed on a proper commercial basis whereby his capital and interest would be secured, what object could he possibly have in wrecking the company? If the directors that day had said to them that if they got the £52,000 they saw their way to put the company on a sound financial basis, he would hold up both his hands, yet they came before them that day, and for the first time spoke about reconstruction. The committee had no intention in the first instance of saying anything about seats on the board. They did not desire to be on the board, and he, least of all. All he wanted was to get back the money he had put into the company. It was the chairman who dangled before their eyes a seat on the board, saying one should be given now, and he would endeavour to give another one afterwards. The members of the committee, being desirous that the company should not be wrecked, came to the conclusion that nothing but an absolute radical change from the highest to the lowest would ever redeem the company from the slough of despond in which it was at the present time. If a trustee for the debenture holders stepped in, the board would be defunct. Would the shareholders not be able to make terms with the trustee? He surely would not swoop down on the property like a vulture and carry it off. It was reasonable to assume that he would do his best for those for whom he was trustee, and that meant that he would do his best for the property. In further remarks, he said that all

a committee was asked for was in order that the shareholders might know the exact position of affairs, and that the company might be placed on a proper commercial basis. There would be no question of throwing mud, as the chairman had more than once suggested. If the directors would agree to a committee that would be an end of the agitation.

The CHAIRMAN said that Mr. Lever had made a rather ungrounded attack upon the conduct of the board in regard to the circular sent out on Monday night. That circular was suggested to him (the Chairman), and was approved by the solicitors to the company. He gave it his full approval after consideration, and took full responsibility for it, for the reason that the question was so important that he thought they ought to use every means in their power to prevent the preference shareholders from, under a misunderstanding, sacrificing their own interests. It had been clearly shewn to the meeting by Mr. Burke that rather than go on with the present board he would prefer that the undertaking should be in the hands of a receiver. That might be his individual opinion; but it certainly amounted to wrecking the company.

A VOICE: "To meet the shareholders' wishes."

Proceeding, the CHAIRMAN said it would meet the wishes of a certain number of the shareholders, but not the majority, because the proxies deposited with the board shewed that it was very possible that even as the matter stood there would be a three-fourths majority in favour of the resolution. But he was very anxious to get a unanimous vote, for a great number of the shareholders had intimated to the board that they recognised that that was really their only line of escape. A receiver appointed on behalf of the debenture holders could at once take hold, not only of £52,000, but of the whole £130,000. As he required working capital he would gradually use up the whole of it, and by failing to pass this resolution the preference shareholders would absolutely let any hold on that money pass out of their hands. The board, however, could not touch that money without a three-fourths' vote. If the vote were passed he thought the directors would probably be able to carry to a successful conclusion the negotiations to which he had already referred. If the vote went against the board they would still do their best. He did not mean to give up the cause of the company until it was absolutely hopeless. It was not hopeless at present; indeed, he believed that if the preference shareholders passed this vote the directors would be able to pull it through.

He regretted that he could not meet Mr. Lever and his friends on the question of a committee. That was a meeting of preference shareholders, called for the special purpose of dealing with the resolution regarding the preference reserve fund. He had already explained what his objections to a committee were. He was perfectly certain that a committee could be of no value to the company at the present time, and, personally, he was not prepared to divide his responsibility with anybody. As long as he and his colleagues were on the board they would take the full responsibility of what they did. No advisory committee could be of value until they had obtained what they had asked for—namely, information as to the exact state of affairs in Baku. He was quite willing that the matter should be submitted, with the whole question of management, to a general meeting of the shareholders. He was perfectly willing for an expert to go out, and when they received his report that would be the time to talk about the management.

An advisory committee would simply be a hindrance to the directors until that report had been obtained. He was not going to have the point of management dragged in, seeing that it was entirely foreign to the question to which the meeting had been called. With regard to there being a difficulty in the case of liquidation in Russia, he happened to know personally what the procedure would be. It would be an extremely awkward matter for the future of the company if it went into liquidation in Russia. He hoped that whatever was done they would be very careful to preserve the unity of the company as a going concern in Russia. Any other course would be simply fatal to their company.

Mr. R. W. SHIRE enquired whether any vote given at that meeting would in any way prejudice the rights of a preference shareholder against the board. He considered their conduct illegal in allowing the preference shareholders' fund to be in any way touched by the debenture holders. He had taken advice on the matter, and strongly maintained that if the board had carried out their duties to the preference shareholders nobody could touch those funds which were that day in dispute, and if the preference shareholders gave that vote he believed it would simply whitewash any claim for redress they might have against the board personally.

Mr. LEVER said it was his opinion that they would invalidate their rights, if they passed the resolution. As to liquidation, it was altogether erroneous to suppose that the company would go into liquidation. There was no liquidation, even if a receiver had to be appointed.

Mr. HOLZAPFEL said that reconstruction had been foreshadowed, but personally he thought liquidation would be quite as good for the shareholders as reconstruction, particularly under the present management. That movement had been started in order to get either the business re-organised and put on a profitable basis, or to save whatever they could of it. The only way they could save that money was through liquidation, unless other people were asked to step in and put things right.

The SOLICITOR (Mr. Stevenson) said one of the proprietors had asked whether if this vote were passed it would prejudice any rights which proprietors might have or might be supposed to have against the board or any member of it. Speaking with a sense of his responsibility, he would say that whatever vote they passed—whether they voted "Yes" or "No"—it would not affect in the least degree their rights, either as individuals or as a body, against the board or any member of it.

Mr. SHIRE: Would the board give an undertaking to that effect?

The SOLICITOR: Certainly not.

A SHAREHOLDER: That shews what value to put on a lawyer's opinion.

The resolution was then put—27 voting for, and 21 against.

The CHAIRMAN stated that a poll had been demanded, and would be opened at once, to be continued the next day. He nominated as scrutineers a member of the firm of the company's accountants and a member of the firm of solicitors acting for the company.

Mr. LEVER suggested the appointment of a third scrutineer to represent the committee.

The CHAIRMAN said he could not accept a third scrutineer as Mr. Lever suggested.

Mr. SHIRE: But why? I don't see what reason you can have against that.

The CHAIRMAN: It is laid down that you can give a decision without giving reasons for it. That is my answer.

The meeting then closed.

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A NEW PATENT FOR OIL BURNERS.

A patent has recently been granted to Mr. William Henry Isaac Welch, of 33, Lichfield Road, Bow, gas engineer, for an invention relating to an improvement in oil burners.

This invention relates to burners for oil lamps and particularly to such as are intended to burn for a considerable period without trimming or other attention, as in the case of railway signal lamps, and may be considered to be an improvement on the lamp burner described in the specification to letters patent No. 1755 of 1906, granted to the present applicant. In this burner it has been found the wick is liable, by expansion within the well at the top of the wick tube, to block the air inlets thereto to a greater or less extent, and thereby produce defective combustion.

The principal object is to remedy this defect, and for this purpose the top of the wick tube is provided with an enlargement forming a cup or well having, preferably, a conical bottom, but not necessarily the lateral openings in the upper part of its walls which were a feature of the burner described in the specification above referred to. Permanently or detachably secured around this cup is a coned or domed cap of a known kind having a suitable hole or slit at the top for the passage of the flame, which hole may also be extended or formed to modify the strength or direction of the streams of air which are admitted through suitably disposed holes in the cap into or around the well to support combustion.

Usually these holes in the cap would consist of two oppositely disposed slits in the side walls, that is to say parallel with the flame slit, and about the level of the top of the wick tube cup, although there might also be additional holes, of any suitable shape and number, suitably spaced around the wall or the base of the cap, or the base of the cap may be left quite open.

The well or cup may have a cylindrical wall or it may be coned either outwardly or inwardly, and may be formed with holes near or notches in its upper edge, and by properly disposing these notches or holes relatively to the air admission holes in the cap the flame may be widened or narrowed or its shape otherwise modified as may be desired.

The invention is illustrated in the accompanying drawing as applied to a lamp burner fitted with an auxiliary oil reservoir; *a* is the well or cup, with preferably but not necessarily a conical bottom, which forms an extension of enlarged diameter of the wick

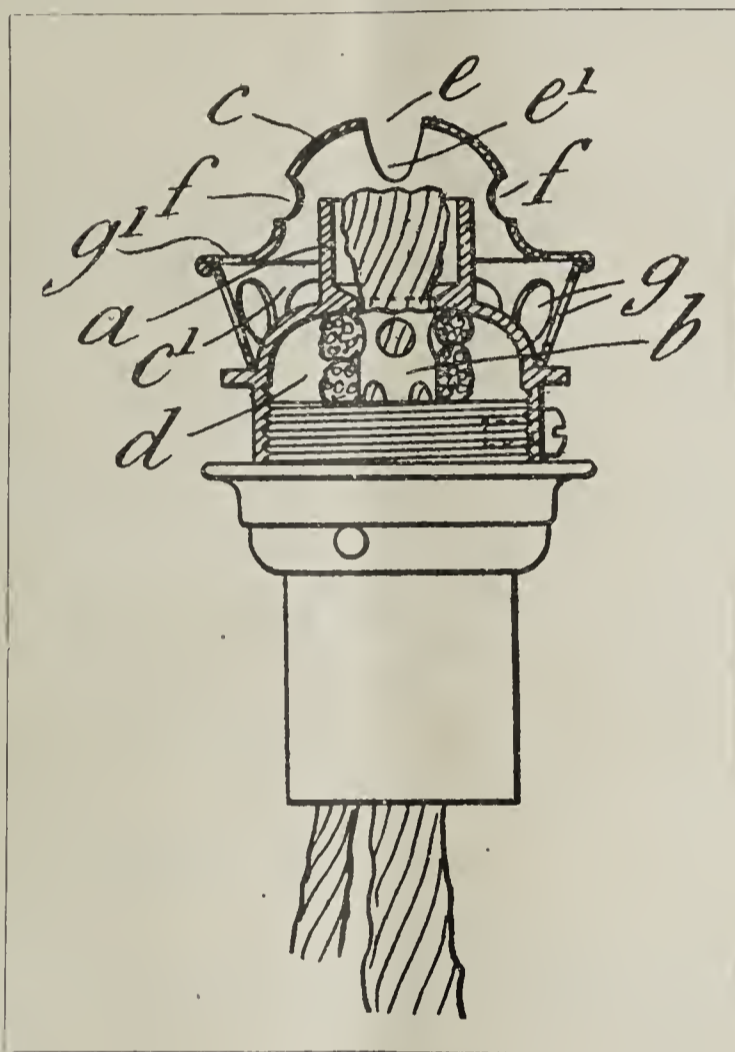
tube *b*, and *c* is the domed cap surrounding the well *a* and, as shewn in the drawing, hinged and secured by a latch to the cap or wall of the auxiliary oil reservoir *d*.

In addition to the flame slit *e* in the cap *c* there are a pair of oppositely disposed horizontal slits *f*, parallel with the flame slit and at about the same level as the top of the well. As shewn, these slits are of such vertical dimensions and are so disposed that the openings extend slightly both above and below the level of the top of the cup *a*, and this is the preferable arrangement.

The flame slit *e* is made longer than is necessary for the passage or formation of the flame, the ends *e'* of the slit being extended downwardly approximately to the level of the openings *f* for the purpose of diverting part of the streams of air entering these openings around the edges of the flame, thereby distributing the supply sufficiently to all points of the flame to ensure complete

combustion of the illuminant, while at the same time causing the formation of a flat and comparatively broad flame.

To supplement the supply of air through the openings *f* the cap may be pierced with additional openings *g g'* symmetrically disposed around the base portion *c'* of the cap *c*, these holes also being arranged, preferably as shewn in the drawing, so that while admitting air freely to the interior of the cap, they do not produce currents of air which would impinge on the flame in any particular direction.



“PETROLEUM FROM WELL TO LAMP.”

A lecture upon the above subject was delivered on the 3rd inst., before the members of one of the Manchester literary societies, by Mr. George H. Watson, the manager of the Manchester branch of the Homelight Oil Co., Ltd. The lecture, which was very interesting, was illustrated by a large number of lantern slides, and Mr. Watson dealt with the subject in a most comprehensive manner, dealing in turn with the origin, geographical distribution, methods of production, refining, the products of distillation, and their transport and distribution. Needless to say, the lecture was thoroughly appreciated.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date December 18th, 1907, as follows:—

Following the rapid fall in the price of Tin, tin plates are again easier, and we make prices of oil sizes to-day as under:—

1c	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	12/9 per box.
1c	19 $\frac{1}{4}$ × 14	120 „	110 „	12/9 „
1c	20 × 10	225 „	156 „	18/- „

F.o.b. Wales. Tin lining and iron hooping extra.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	$\frac{1}{2}$ - $\frac{5}{8}$
Baku Russian Petroleum ..	£750,000 Ord.	£1	2/3-2/9
Bibi-Eybat Petroleum Co. ..	£650,000 5½% Pref.	£1	4/0-4/6
Californian Oilfields ..	£250,000 Ord.	£1	6/0-7/6
Commonwealth Oil Co. Pref.	18/- paid up (Prem.)		5½-5¾
Def..	£1 fully paid		16-16pm
European Petroleum..	£550,000 Pref.	£1	18-18½
" ..	£550,000 Ord.	£1	1/0-2/0
" ..	£376,000 Deb.	£100	0/6-1/6
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	70-74
Schibaieff Petroleum ..	£600,000 Ord.	£1	3/6-4/6
Shell Transport & Trading ..	£575,000 6% Pref.	£5	1/9-2/9
Spies Petroleum Company ..	£575,000 Ord.	£1	1½-1¾
	£2,000,000	£1	3/0-4/0
	£1,000,000 Pref.	£10	41/6-42/6
	£312,500	10s.	9½-9¾
			6/6-7/0

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Dec. 16th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	553	556
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,350	4,400
Mazout Co.	250	400	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	155	157
Neft Co.	250	—	—
Nobel Bros.	5,000	10,550	10,650
"	250	—	—
Rops and Co. V... .. .	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading			
Co.	250	—	—
" (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£1 17s. 9d.
Do. 6% Cum. Pref. ..	£100,000	£10	£11 18s. 9d.
Burmah Oil, Ord.	£1,100,000	£1	£3 4s. od.
Do. Pref.	£250,000	£1	£1 4s. 9d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	£6 15s. od.
Do. 5% Pref	£18,900	£7	£4 13s. od.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 10s. od.
(17s. paid)			
Pumpherton Min. Oil Co., Ltd., Ord.	£110,500	17s.	£13 5s. od.
(17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	£13 os. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 16s. 3d.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 7s. 6d.
Do. "B" Deb...	£150,000	£100	£155.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins.
Arnhemsche Petroleum Mij.	—	1,000
Aurora (Deb. 5%)	—	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	100	50
" (Deb. 4½%)	100½	1,000
Gaboes	1	—
Holl. Rumeensche Petroleum Mij. ..	16½	1,000
Int. Rum. Pet. Mij.	80½	500
Java Petroleum Mij. (Ord.)	—	1,000
" (Pref.)	23½	—
Koninklyke Nederl. Pet. Mij. Shares ..	273	250-1,000
" Share certificates ..	271½	1,000
Mœara Enim Petroleum Mij.	130½	100
" 1-1,000 Oblig. 5	—	250-1,000
" Moesi Ilir " Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij. ..	5	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	45	—
" (Deb. 5 %)	—	—
Panolan Maatschappij Cert.	—	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	123½	1,000
" (Common)	—	—
Sumatra-Palembang Petroleum Mij ..	89¾	500
Tarakan Petrol Mij.	20	—
Zuid Perlak Petrol. Mij. (Pref.) ..	88½	—

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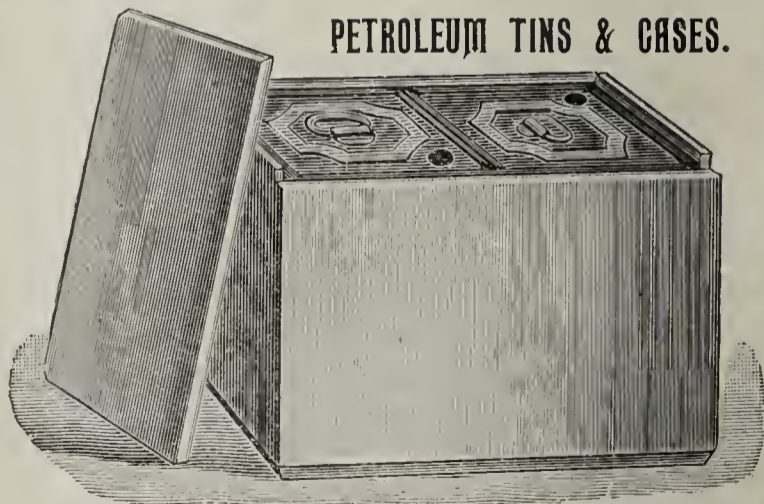
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SATURDAY, DECEMBER 21, 1907.

**THE SEASON OF "PEACE AND
GOODWILL."**

THE festive season of "peace and goodwill" is again upon us, and with it also comes the drawing to a close of another year, and the dawning of a new. It is, therefore, perhaps fitting that upon such an occasion we should wish to every subscriber of the REVIEW in every part of the world, to everyone interested in the various branches of the petroleum industry, and to our friends—one and all—a happy Christmas and a most prosperous New Year.

It is at this period of the year that our mind naturally reverts to the chief occurrences of the dying year, and in taking a brief retrospective glance, we cannot but come to the conclusion that, generally speaking, the year 1907 will live in the memory of those engaged in the petroleum industry as a period during which the industry took a decided leap forward: the events of the closing year stamp it as being a twelve months of almost unprecedented progress.

Without doubt, the one most conspicuous feature of the year is that the petroleum industry all the world over has strengthened to an extent hitherto unrealised, its hold upon commerce, and like the sturdy oak, it has

grown from the small things of the past, to now be a great power of strength. To-day, in almost every quarter of the world, hundreds and thousands of persons are regularly employed in the various branches of the petroleum industry, and as time goes on, each passing year registers a steady increase in every direction.

We have been inclined to think—and there was reason for it a year ago—that the efforts put forward in various countries on behalf of competitive illuminants, were gradually bringing about a decline in the consumption of illuminating oil, and had this been more than a temporary re-action, the results would have been serious to the industry as a whole. We are thankful, however, to say that to-day the demand for illuminating oil is as great, if not greater than ever before, and even so far as this country is concerned, illuminating oil is holding its own against all-comers. For some years past, the growing popularity of the internal combustion engine has naturally brought the benzine question into greater prominence, and when we state that during the present year considerably over 30,000,000 gallons of motor spirit has been imported into this country, it will immediately be apparent how great an influence for good has the coming of the motor car had upon the petroleum trade. Interested parties have from time to time put forward various arguments for the adoption of other fuels in this respect, but it is gratifying to note that no serious attempt has been made at substitution. The one fear of dearth of supply of petrol has now given place to a feeling of confidence among all concerned, and the recent several reductions in the retail price of spirit suggests to the most casual observer not only that petrol has come to stay, but that the supply is capable of meeting all the demands made upon it. It is safe to say that, as this year closes, the voice of the pessimist is stilled, and we hope that we have now heard the last of that parrot-like cry of a famine in petrol.

Glancing to another branch of the oil trade, the year 1907 has seen truly wonderful strides made in the more general adoption of liquid fuel. The British Admiralty, after carefully probing the question to the bottom, and after a series of most drastic experiments, has given its vote in favour of liquid fuel, and following this up, we now see the important programme it has drawn up with reference to the erection of complete installations around our shores which will serve as storage depôts for the new fuel. To-day our Government has its own tank steamers, and we believe we are correct in saying that as this year closes, it sees the first Government oil-tanker returning from Texas with a large supply of oil fuel for the fleet. This is a distinct step of progress, the importance of which cannot be over-estimated as affecting the extension of the petroleum industry, but we have reason to believe that in the not far distant future, other developments for the wider adoption of liquid fuel in our centres of commerce will have to be recorded, for one success invariably leads to another.

Before concluding our comments upon the oil trade at home, it is well that we should refer to one important subject, which the prosperity of the English oil trade has, during the present year, brought in its train. The

question of oil freights has arisen during the year in a most surprising manner, and when we say that at the present time they are approximately three times as great as they were at the closing of 1906, it is clear what a boom oil freights have experienced of late. That these high rates will continue for some months to come, is looked upon as a certainty, and even in the middle of next year, when a large number of new oil tankers will have left the stocks and be put upon regular service, it is questionable whether the drop will be very appreciable.

All this goes to shew in what an unmistakable manner the petroleum industry is rising "to greater things." In the producing fields, too, throughout the world, we see the same march of progress. Even in the Caucasus where open enmity has been displayed for many months, there are many signs of "peace and goodwill," and the now less frequently recurring strikes at the oil-fields, suggest that the days of better understanding between men of all nationalities are at hand.

For ourselves, it is politic that we should say but little. The REVIEW has certainly marched with the industry, and to-day, more than ever before, is recognised as the universal organ, and to us it is a source of real pleasure to find that our large circle of friends is steadily increasing in all parts of the world.

Therefore, it is with the best interests of the petroleum industry at heart, that we again wish to our subscribers—

A Merry Christmas and a Happy New Year.

LONDON OIL SHARE MARKET.

FRIDAY, DECEMBER 20TH, 1907.

Although the hoped for revival on the Stock Markets has not yet taken place, the tone has kept remarkably steady, and it is generally anticipated that after the Christmas holidays a marked improvement in all directions will set in.

Since our last issue, the alterations consist of an advance of $\frac{1}{16}$ in Californian Oilfields, which after declining to $5\frac{3}{8}$ - $5\frac{5}{8}$, improved again to $5\frac{9}{16}$ - $5\frac{11}{16}$, subsequently losing $\frac{1}{16}$ and remaining a steady market at $5\frac{1}{2}$ - $5\frac{3}{4}$, which shews a rise of $\frac{1}{16}$ on balance, while the First Mortgage Debentures have risen 2 points, and stand at 96-99. On the other hand the Refineries are not quite so good, being only quoted $7\frac{7}{8}$ - $1\frac{1}{8}$, thus registering a loss of $\frac{1}{4}$. An improvement is shewn in both Russian Ordinary and Preference, the former gaining 9d. per share at 2s. 6d. to 3s. 6d., and the latter $7\frac{1}{2}$ d. at $\frac{3}{16}$ - $\frac{1}{4}$. The Schibaieff Co. has also registered an advance, the Ordinary Shares gaining no less than 1s. 6d. at 3s. 6d. to 4s. 6d., this being 6d. below highest price touched in the interim, while the Preference have gained $\frac{1}{4}$, at $1\frac{1}{4}$ - $1\frac{1}{2}$.

Shell Transport Ordinary have remained very stationary, and as we write the quotation of 43s. to 44s. shews a decline of 6d. per share on balance, while the Preference are without change, although at one time they shewed a slight falling off in value, which has subsequently been recovered. The only other alteration is a fall of $\frac{1}{16}$ in Assam Oil, at $\frac{1}{2}$ - $\frac{5}{8}$.

The Future of Petroleum as a Raw Material for the Chemical Industries.

By Dr. R. WISCHIN.*

(Concluded from page 323.)

In the following lines I will sketch out how these various products can be obtained from the first chemical products of transformation. I shall not go to the length of enumerating all the theoretically possible reactions, but I shall limit myself to enumerating those reactions which I have proved and which I find easily applicable to naphthenes.

The hydrocarbons of terpenes are extracted from naphthenes by transforming the latter into dichlorides by chloruration in the presence of water and subsequently separating the chlorides from hydrochloric acid.

The separation of the hydrochloric acid may be attained in practice in the following ways:—

By boiling the chlorured products with iron dust, zinc dust, or chloride of aluminium; by heating with phenol and caustic soda; by introducing vapours over nickel, iron or copper, finely divided, at certain temperatures; by boiling with potash in alcohol solution; and, finally, by heating with chinolin or piridine, an operation which produces hydrochloric salts, from these bases, which constantly regenerate themselves.

The aromatic hydrocarbons are obtained from naphthenes by the saturated bromuration in the presence of bromide of aluminium and by a later treatment with zinc and chlorhydric acid or by heating with bromide under pressure.

In crude oils, which by their nature contain large quantities of aromatic hydrocarbons, as is the case, for instance, with Roumanian crude oils, these aromatic hydrocarbons can be extracted in the following manner:—

The oil is treated, at a temperature of 70 to 80 degrees, with fuming sulphuric acid, and the acid residue is decomposed in an autoclave, adding water under a pressure of 2 to 3 atmospheres. Under favourable conditions of working three layers of liquid are obtained: one layer of diluted acid, a second layer of aliphatic hydrocarbons, and a third layer of aromatic hydrocarbons.

Hydrated anilines can be obtained both from the hydrocarbons and from the petroleum acids; or first may be obtained, by means of pentachloride of phosphorus, chlorured acids, and from these the amides, which, when heated with bromine and soda, are transformed directly into hydrated anilines, or the chlorides are heated with amides in an autoclave, which directly produces secondary amides; or, lastly, we begin from the chlorured hydrocarbons, which, by heating with ammonia in alcoholised solution, in an autoclave and under pressure, give us also hydrated anilines.

Siccative oils and varnishes are to be obtained in the same way from chlorided hydrocarbons, as we have described for the preparation of terpenes, but as raw

material for this operation the first fractions of solar oils are to be used.

We now come to that part of the question dealing with organic acids for the manufacture of soaps. The natural naphthenic acids by themselves already constitute suitable acids for this manufacture, and in Russia these acids are already used frequently as a substitute for fatty acids in the manufacture of soap. But the soaps made from this material give a penetrating and very disagreeable odour. This odour is a special characteristic for naphthenic acids and cannot be eliminated by purification. In my opinion, a transformation in the molecule of these acids will bring us to a suppression of the odour.

In view of the fact that the odour of the natural acids is the less pronounced the greater their molecular weight, I believe that it would be possible to arrive at the desired end if the acids could be halogenised, and if halogen could be substituted by a compound of as heavy atoms as possible. We might also try to transform the naphthenic acids into oliphatic acids by breaking the chain.

Glycerides from naphtene acids.—The preparation of glycerides is a process easy to carry out in practice with a very large yield. Glycerides may be obtained:—

(1) By continuous heating of acids with glycerine.

(2) By treatment of a mixture of acids and glycerine with gaseous hydrochloric acid, and heating of the dihydrochloric ethers formed with soda soaps from naphthenic acids or other organic acids, which gives us simple or compound triglycerides.

I have prepared a great deal of similar triglycerides, partly oily and partly greasy, and I have noticed that the crude products have an odour similar to that of allylic alcohol, but this odour can be easily eliminated by the introduction of steam.

Ketones as a material for impregnation and denaturation.—The lyes left after refining yield, by boiling with lime milk, a compact precipitate of calcium soap, which after being dried and submitted to a dry distillation, give us directly crude ketones. If these calcium soaps are mixed with calcium salts of other organic acids, acetic acid for instance, we get compound ketones, which generally have a pleasant odour which is characteristic of ketones.

Various chemical products, especially synthetical odoriferous products.

Turkish Red Oil.—It is well known that naphthenic acids after sulfonation give us a product which can be employed instead of Turkish red oil. Some time ago experiments were made with this oil in Geneva to use it for dyeing purposes, which gave satisfactory results; but after the operation the textile retained an unpleasant odour. It is not improbable that by increasing the density of the molecule of the natural acids mentioned above, the odour will be eliminated.

* A Paper read at the Third International Petroleum Congress.

Di-basic organic acids of the aliphatic series.—Aschan has obtained adipic acid by the oxydation of hexanaphthene by nitric acid. I have also tried this process and I have also obtained adipic acid in sufficient quantities. It is possible that the aliphatic di-basic acids could be also of considerable industrial importance, especially in the manufacture of synthetical odoriferous substances, if their price could be reduced to any appreciable extent.

Synthetical odoriferous substances.—The majority of synthetical odoriferous substances at present known are the products of natural terpenes of a cyclic and aliphatic character, and the natural naphthenes, presenting in their structure a great resemblance to natural terpenes, it is possible that they could also be obtained synthetically from terpenes.

There are several methods which lead to this result, but the one chiefly adopted will be the Grignard synthesis, which, as is well known, consists in letting metallic magnesium in a solution of ether act on a halogenic alkyl and thus producing an organic combination with magnesium; the latter in the presence of a new molecule of halogenic alkyl, re-acts in such a manner that the halogen is replaced by the rest of the alkyl from the organic combination of magnesium. The second halogenic alkyl may also be replaced by other atomic compounds, and we may, for instance, introduce by the action of ethers formic acid of the carbonyl group instead of halogen. The magnesium compounds treated with bioxyde of carbon produce organic acids; treated with air and oxygen they give us alcohols, etc.

ROUMANIAN PETROLEUM EXPORTS DURING OCTOBER.

The following are the figures of the exports of various petroleum products from Roumania to different countries in October (in tons):—

Destination	Crude, gas oil, distillate, and lub. oil. Tons.	Illuminating oil. Tons.	Benzine. Tons.	Total. Tons.
France	414	7,074	8,182	15,670
England	5,498	3,289	—	8,787
Egypt	—	4,847	—	4,847
Belgium	14	4,597	—	4,611
India	—	4,587	—	4,587
Germany	13	—	4,101	4,114
Turkey	65	3,018	—	3,083
Holland	2,632	—	—	2,632
Austria-Hungary ..	598	924	11	1,533
Italy	1,260	71	109	1,440
Other Countries ..	175	242	36	553
Total	10,669	28,649	12,439	51,757

THE PETROLEUM DEPOSITS OF PORTUGAL.

The *Board of Trade Journal* states that H.M. Minister at Lisbon reports that hopes are entertained that the recent discovery of petroleum in the province of Angola may prove to be of importance. Prospecting has been carried on by some Portuguese firms in the district of Dande, and a concession has been obtained from the Government by Messrs. Canha and Formigal, of Lisbon.

PETROLEUM IN THE CRIMEA.

Availing himself of the opportunity of Mr. Anton Raky's sojourn in St. Petersburg, a correspondent of the *Trade and Industry Gazette* obtained from that gentleman the following details regarding his recently commenced petroleum explorations in the neighbourhood of Kertch:—

Mr. Raky is now drilling four boreholes, and one of these has reached a depth of 100 metres. The second is 85 metres and the third and fourth each 70 metres. Mr. Raky expected to strike oil in a very short time—not more than a few weeks. His expectations are based on the explorations carried out by himself and data supplied by the abandoned boreholes in that locality, which were drilled some time ago by a French company. These old wells are still occasionally yielding small quantities of oil.

Mr. Raky is of the opinion that on the Kertch Peninsula there are three oil horizons. The lowest horizon is 1,491 feet, whilst the first horizon is 455 feet, the intermediate oil stratum being at 791 feet. The quality of oil varies and on the average yields 18-19 per cent. of illuminating oil and 55-60 per cent. residuals.

Asked as to what he had to say in regard to water-flush drilling, in view of its condemnation by certain parties in Russia, Mr. Raky replied that he had on many occasions found oil with his water-flush borings where others drilling without water failed to find it. This happened in Hanover, Alsace, and also in Roumania. He ridiculed the supposition that water-flush drilling involved any danger of watering the oil stratum. Even with the so-called dry drilling the borehole was always full of water. He had offered to many experts to satisfy them by means of accurate measurements that he gets back from the borehole exactly as much water as he forces into it for flushing purposes. The outcry about watering the strata was therefore mere prejudice.

The area of the concessions taken up by Mr. Raky in the Kertch district was about 190,000 acres, part of which is on the Kertch Peninsula and part on the Taman Peninsula. When the four wells now in drilling prove successful more wells will be laid down. All the necessary materials are already on the spot.

The great advantage of the Kertch oil fields, in Mr. Raky's opinion, is their geographical position, which will give them an advantage over Baku in the cost of transport by 14 copecs per pood. On the strength of the results of the prospecting work, Mr. Raky has already sold in advance 5,000,000 poods of crude oil.

In regard to the financial part of the enterprise, Mr. Raky said that he was at the head of a syndicate, in which some Russian people are also interested. Later, when success has been achieved, they will develop into a company.

Apart from this, Mr. Raky is now working on the organisation in Russia of a company on the lines of his Erkelenz concern. His Russian patents, which were formerly sold to a French company, have already been bought back by him, and he is now seriously considering the question of working them.

THE COMMONWEALTH OIL CORPORATION, Ltd.

ANNUAL MEETING OF SHAREHOLDERS.

PROFITS BEING EARNED—DIVIDENDS PROMISED.

The second ordinary general meeting of the shareholders of the Commonwealth Oil Corporation, Ltd., was held on Wednesday at the Westminster Palace Hotel, London, S.W., Sir George Newnes, Bart., M.P. (chairman of the company), presiding over a large attendance.

The SECRETARY (Mr. Charles F. Jones) having read the notice convening the meeting and the report of the auditors,

The CHAIRMAN moved the adoption of the report and accounts. He said: I am glad to say that since our last general meeting the progress which has been is more than satisfactory. Very important developments have taken place, and forecasts have become accomplished facts. The railway is now in full working order for all the purposes of the company. Both in the period of construction and the cost, the estimates of our engineers have proved to be correct. The extra expense has been alone incurred by conforming to the requirements necessary to make it a Government passenger line, which was not contemplated when these estimates were made. Our company will be recouped for this additional cost by the great advantages which the Government has conceded as a consideration for the outlay, and also by the increased traffic. The railway has been built in a thoroughly workmanlike and efficient manner, and in a word, the line is worthy of the great undertaking it is to be the means of developing. Whilst giving credit to many others who have been engaged upon it, I wish especially to mention three names of engineers who have largely contributed to its success. I first refer to our consulting engineer, Mr. D. A. Sutherland, who, recognising the importance of this work, has thrown himself into it with great assiduity and ability. Mr. Sutherland has been six months of this year on the spot, and the directors are of the opinion that no half-year's work could have been better accomplished. I may say here that Mr. Sutherland returns to our property as soon as possible after this meeting. I must give more than a word of praise to Mr. H. Deane, the late Chief Engineer to the Government Railways. The design of the railway and carrying out of its construction have been worthy of Mr. Dean's reputation, and must rank with the best work he has done. The actual superintendence has been carried out by Mr. J. D. Simpson, who was the company's constructing engineer, and who has ably acquitted himself in that capacity in which he had at one time over 1,400 men under his control. It is anticipated that Mr. Simpson will long remain in the service of the company in charge of the line he has constructed. The average cost of railway construction in New South Wales is £12,800 per mile. Our line, though the greatest possible care has been taken to ensure the efficient and substantial character of the work, has cost between £4,000 and £4,500 per mile. Having regard to the fact that it is admitted to be one of the best constructed lines, this speaks well for the care and economy that has been shewn. It will interest the shareholders to know that, on the suggestion of Mr. Sutherland, the Government of New South Wales has arranged for a cinematograph series of photographs taken on the railway for use at the forthcoming Franco-British Exhibition in London, and shareholders will, therefore, have an opportunity of seeing for themselves the nature of the difficult and arduous undertaking which has now been successfully accomplished. A very large tract of country has been opened up, and there is on it abundance of timber. There are valuable deposits of clay and iron stone, besides coal and shale. There is little doubt that the trade in cattle and grain will develop in addition to the requirements of what must eventually be a largely populated district. The railway has been dealt with at some length, as it is the last occasion on which it will have the same interest to the shareholders. Their attention will naturally be concentrated upon the realisation and turning into money of the other vast assets the corporation possesses. The first and most important of these are the immense shale fields on either side of the Wolgan and Capertee Valleys, which, as the results of numerous adits, trial shafts and long tunnels, the combined length of which is fully two miles, justify the claim that they are the largest deposits of the kind known in the world. The first thing to notice is that the shale occurs in layers of two qualities, the best and richest is of considerable market value for gas-making purposes, as can be readily seen from the fact that one gas company on this continent has been able to take as much as 10,000 tons from us within a single year. Such shale gives an exceptionally large amount of over 17,000 cubic feet of gas per ton, the illuminating power exceeding 45 candles, and is, therefore, of more value for gas-making purposes than any cannel coal or other substance in the

market. The less rich shale is used for retorting purposes, and had been originally estimated to contain 60 gallons of oil per ton, but subsequent developments have shewn that the average is in excess of 80 gallons, and still later developments shew that 100 gallons per ton may confidently be looked for. These figures are not the results of selected picked samples, but state a fair average of retorting shale from top to bottom of the seam after eliminating the rich portions which contain 130 to 150 gallons per ton, and which have been referred to as export shale. It is of importance to emphasise that the primary object of this company is for the conversion of the retorting quality of shale into oil, and for refining the products. Everyone in Scotland knows, or ought to know, the commercial value of shale, and Scotch people are generally considered to know a good thing when they see it, but in this instance we possess an oil shale such as does not exist in Scotland except as a geological curiosity, so that it will be to the benefit of shareholders to explain very briefly its commercial value. Scotch shale contains about two-thirds of its weight of residual shale or mineral matter, while the Wolgan contains only 15 to 30 per cent. Scotch shale yields at most 30 gallons of oil per ton, while the richest Wolgan gives the yields already mentioned, viz., 130 to 150 gallons, and the process of distillation is the same in both cases. The oil so obtained is formed in the process of heating, and does not exist as an oil in the shale. You cannot by squeezing obtain the oil, but like coal tar it results from a chemical process called "destructive distillation." As can be seen by the figures from 30 to 50 per cent. of the weight of the original shale is obtained in the form of crude oil. A very simple experiment of lighting a piece of shale with a match and watching it burn will shew the latent richness. Like crude petroleum this crude shale oil yields motor spirit, illuminating oil, oils for gas-making purposes, lubricating oils, paraffin wax and other products. From the wax, candles are made, and for all these products there is a ready sale in Australia at profitable prices from two to four times as great as those ruling in this country. The corporation shale field is, therefore, a gigantic oil field, and it is well to point out that it is not at all speculative in character, but is as great a certainty as a proved coal field. It may be more intelligible to some instead of saying, as we do in the report, that we have 20,000,000 tons of proved shale, and I may add an assumable 30,000,000 tons more, we can say 7,000,000 to 10,000,000 tons of oil or 40,000,000 to 60,000,000 barrels, or again, 24 hundred million gallons, requiring not wells but retorts such as we are now providing. I may further point out that companies for the production of crude oil alone have been successful in Scotland, and even now the Tarbrax Co., a subsidiary of Pumphreston, is increasing its plant, and thereby will, no doubt, make handsome profits which may possibly enable the parent company to increase its present dividend to 50 per cent. It must, therefore, be clear, that in this shale field alone there are very great possibilities for the corporation. It is a point that the board can keep constantly before them that, while proceeding cautiously in completing one stage of development before commencing another, they will not hesitate to recommend extensive operations in order to turn their vast resources into hard cash as soon as possible. It may be that it will be advisable to form subsidiary companies, we agreeing to take the oil that they manufacture. Sir William Lyne, now the Commonwealth Chancellor of the Exchequer, when attending the Colonial Conference in London, took some interest in our company, and told us that if we have one foot of shale of the richness described, we should be mining money. This was his own exact phrase, and he promised to visit the property on his return; and notwithstanding his Governmental duties, he found time to do so. As a result, he stated that we had 17 inches increasing through the mountains to the Capertee side to 4 feet 6 inches. This 17 inches has already opened up to 27 inches. Scotch companies are advancing by leaps and bounds, and the dividends shew eloquently the profits that can be made even with shale containing only 30 gallons to the ton, and I may add that in many cases it does not exceed 26 gallons, in face of the keen competition of the petroleum companies, and the much lower prices which prevail here as against those in Australia. It is noteworthy that in Scotland good shale properties are looked upon as such a sound investment that the Pumphreston shares stand at the price to yield £3 8s. per cent. The Scotch shale companies are capitalised at about £1,500,000 and their market value to-day is £3,000,000. Ordinary bricks for building purposes and fire bricks for the retorts are now being made by the company. Sawmills are at work preparing timber, and there are immense

quantities of sandstone for building purposes, and the water supply is adequate. The Wolgan river has never been known to be dry. The rich seam of coal we have discovered has been developed to give 400 tons a day. The coke we are making from this contains only 9 per cent. of ash, and is therefore in good demand for large quantities. This trade will be a substantial addition to the earning power of the company. Possessing as we do the largest and richest shale field in the world, we know that when the retorts and refineries are completed we shall be able to treat 300 to 400 tons of shale a day, producing 80 to 100 gallons of oil per ton. Even this large quantity can, and probably will, be largely exceeded. It was to obtain this great object that we subscribed our money and invited others to join us. I ask you always to keep this in mind when estimating the value of our corporation. For its realisation two great works were necessitated, the making of the railway and the building of the retorts and refineries to produce the oil. All has proceeded so far, I will not say without a hitch, but without anything to mar the correctness of our calculations. Indeed, the results have done nothing but confirm them. The railway, which pessimists, probably jealous of our discovery, freely predicted we could not make, has been successfully accomplished. The building of the retorts and refineries, though most important, is a comparatively simple work, and is only a question of time. If built with the care which is necessary, and which we intend to bestow upon them, they will take about 18 months to complete, but whilst this work is going on we have other immediate resources of income which I will explain to you. We are already earning profits from three sources: (1) the sale of export shale; (2) the sale of coke made from the rich seam of coal we have discovered; (3) the successful trading of the business purchased from the New South Wales Shale and Oil Co. It is not necessary, nor would it be wise, to publicly state the nature of the contracts into which we are entering, or to give general details of the way in which the profits we confidently anticipate will be, and are indeed being, realised. This must be left to the directors, who are most solicitous that, while the ultimate goal of our ambition is being approached, substantial dividends shall be paid in the meantime. The directors do not make any statement with regard to this in the report. It was thought it would not be proper to do so, but it is right that at the meeting of shareholders I should put before them the knowledge which is in the possession of the board, based upon what has already been done and upon reasonable calculations for the future. We confidently anticipate being able to commence to declare dividends on the trading to the end of next June. We consider that a dividend of 6 per cent. on both classes of shares for the half-year ending 30th June next is practically assured. We consider it more than probable that the dividend of 6 per cent. on both classes of shares for the entire year ending at that time will be available. If the hopes we entertain as to our contracts are fully realised it is possible an even larger dividend may then accrue. Of this latter, devoutly to be wished, I speak with some reserve; of the second with every hope; of the first with practical certainty, so that while we do not ask you to wait for good dividends until the retorts and refineries are completed, I wish you to remember that it is then the full and rich harvest of our hopes will be realised. I have to state that we have complied with the requirements of the Stock Exchange Committee, and an official quotation will shortly be made for our shares. I have now to make an important announcement which some of you may anticipate with regard to the future developments of our property. The directors have decided to make a debenture issue. Some particulars of this I will now give you, but full information will be contained in a prospectus which will shortly be in your hands. In the purchase of the New South Wales Co., which was a most satisfactory one, £35,000 was absorbed for land, plant, machinery and goodwill, £7,000 more for stocks, the market value of which was £11,000, whilst additions to the property in order to give larger reserves of shale has since added slightly to the original capital outlay. Then a further £25,000 will be absorbed in the new plant which should be at work at Torbane in February, and helping in the dividends by next summer. £25,000 will be spent in developing the coal and coke reserves now at our disposal. A further £25,000 already referred to on the railway, which is earning good interest on the outlay, and the extra cost of rolling stock which will be added from time to time will be amply recouped by the reduction of freights. The opportunity of acquiring freehold land near Sydney for the candle works enabled us to purchase a large site which has since been valued by one of the leading firms in Sydney at almost double what we paid for it. The amount absorbed in this way comes to about £150,000, and after careful consideration the directors have decided to provide this money by means of a new issue. It was felt that with the present abnormally depressed condition of the market, when

shares of all denominations are at an artificially low price, it would be unfair to the corporation to issue deferred shares which have been specially reserved for the securing of further capital, a contingency which the directors have long foreseen to be probable in the face of a company possessing such an exceptionally valuable property. In connection with the debenture issue, an option is being given on these deferred shares, which should make the investment additionally attractive. The proposal is as follows:—£150,000 of debentures should be issued in bonds of £50, 10 per cent. to be payable on application, 10 per cent. on allotment, the remaining amount in equal quarterly instalments extending over 12 months, as we shall not want anything like all the money for a considerable time, and bearing interest at $5\frac{1}{2}$ per cent. The holding of these debentures, in addition to the $5\frac{1}{2}$ per cent. interest, carries with it the option of obtaining at any time during the period of 18 months the remaining 75,000 deferred shares on payment of £2 per share in proportion to each debenture holding. These deferred shares, though at a high premium, are at a less price to-day than £2, but it is obvious that after we have begun to pay dividends, and as the erection of refineries purchased will be nearing completion by the end of 18 months they will be much enhanced in value. The advantage to the debenture holders in this offer is that if the deferred shares stand at a higher price than £2 they will be able to acquire them at the latter figure, and if they do not go beyond this there is no compulsion to take them up. The directors and their friends are prepared to subscribe for half the debentures if necessary, and the indications of others coming in are such that I may say the issue is practically assured. It was thought, however, by the directors that an issue of this kind, carrying with it as it does the attractive option to which I have referred, should be offered as widely as possible to all those interested in the company, and therefore the present shareholders will have the preference in the allotment. As I have said, a full statement will shortly be issued giving particulars of the assets upon which the debentures are based and all other necessary information. The Commonwealth Oil Corporation will be in a most favourable position to carry on the gigantic business which lies at its door. Two and a-half years ago we only knew the shale was there in great quantities and in great richness. A difficult mountainous country lay between us and the treasure. The building of the railway has placed the prize within our grasp. We are on the very threshold of realisation. It now only requires careful and energetic management to produce results which will splendidly repay all the patience and all the confidence which have been shewn in this great enterprise.

Sir WILLIAM B. AVERY, Bart., seconded the motion.

Mr. D. A. SUTHERLAND, F.I.C. (consulting engineer and general manager), who was received with applause, said: After the very full remarks of the chairman and the long statement which I had the privilege of making to the shareholders last August, and the many replies which I made to the questions asked, it is not necessary for me to say very much on this occasion. I should like to say, in the strongest possible way, that all our developments could not be proceeding in a more satisfactory fashion, and that every foot we drive in either coal or shale discloses stronger evidence of the almost unlimited quantities of valuable mineral on the company's properties. It is quite impossible to explain in any single speech the magnitude of the enterprise upon which we are engaged. The entire mineral area of the corporation amounts to about 41 square miles, of which about 36 square miles are in the Wolgan-Capertee district. It is important to note what is perhaps not generally understood, that the entrances to our mines or tunnels are situated at an elevation of from 60 ft. to 140 ft. or more above the level of the valleys, so that the course of the outcrops can be most distinctly followed, and this fact, together with the continuous exposure of valuable oil shale in the long tunnels which have been driven, and in several instances opened up on both sides, enables us to estimate the great tonnage which has been so exposed. I have, I think, visited all the other known deposits in New South Wales, and have seen nothing that for one single instant can be compared to the properties of the company. In the first place, we have this enormous area of regularly-lying shale, and, secondly, what is of equally great importance, our shale is of a quality superior to any other. The greatest care has been taken to ascertain the value of our shale, and very careful tests have been made every 50 ft. in driving our tunnels, analyses being made of every few inches from the top to the bottom of the seam. The analyses shew that the shale of retorting quality rarely yields less than 80 gallons per ton, while large sections give 130 and more gallons per ton, and in the aggregate these constitute about 60 per cent. of the seam in the greater portion of our developments. These figures would give, on the quantities that Sir George Newnes mentioned to you, from 10,000,000 to 12,000,000 gallons of oil per annum, yielding, amongst other products, about 3,000,000 gallons of kerosene or illuminating

oil. I have therefore no hesitation in saying that we have in sight the largest quantity of shale, and, consequently, oil, that I know to occur anywhere in the world. I should like to add one word more as to the quality of oil which is obtained from our shale, namely, that the oil which we have obtained from our large properties, now made available by the railway, is of a quality superior to any that I have known to be obtained from shale. It will be superior to the oil that we are producing at Torbane. Next year the shareholders will have an opportunity of seeing for themselves the high quality of the oils, candles, and other products at the Franco-British Exhibition in London, as the Government of New South Wales has very kindly offered to convey the products here, and to give them a place in the New South Wales State Court.

The development of our coal mines has proved the astonishing regularity with which the coalbed lies and the very great evenness of its quality, which shews the same assay value in ash at all points great distances apart. The coke, of which I have here a sample, is of high-class quality, hard, and capable of bearing a considerable burden in the furnace. The percentage of ash, although given in the report as 11 per cent., has now been shewn on a sample of 60 tons to average less than 9 per cent. This coke, which does not contain more than one-half per cent. of sulphur, is a most valuable asset, and we have now made several hundred tons in our four ovens. Clamping experiments have been carried out, and by a cable received yesterday I learned that we have made coke containing 10 per cent. of ash by this old-fashioned method. This process, which dispenses with the use of ovens, will enable us to realise some immediate profit from coke, as at present there is a very large demand, both in Australia and for export, for such a coke as against the coke containing 16 per cent. ash which is at present being exported from Australia in tens of thousands of tons. I am glad to say that in the few days which have elapsed since the issue of the report we have been approached by large shipping houses in London and in Australia to know what amount of coke we can deliver. The construction of coke ovens is now being proceeded with, and, in anticipation of the successful result now obtained, our two shafts have been equipped in order to allow of an output of about 400 tons daily of coal, so that we can manufacture eventually about 1,500 tons of coke per week, and this capacity can be increased to almost any extent desired. I have before referred to the many other advantages of the situation of our property, in that it has an adequate water supply and, amongst other valuable assets, has large beds of clay, both for the making of ordinary bricks and for the making of high-class firebricks equal to those made in this country. I wish to add to that, that we have lost no time in getting down machinery on our railway, and that to-day we have brickworks erected with a plant which has a capacity for making 10,000 bricks daily. The construction of our new crude oil works and refinery has now commenced, and we are endeavouring to obtain as much as we can of our requirements locally, so far as is possible consistently with the time of delivery and economy. As to the Hartley Vale Refineries, these have been recently re-organised, and will be able to put out a considerably increased quantity of oil in the future. This has been necessary in order to provide for the oil from the new retorts, in addition to the increased quantities of oil we may also obtain from the old retorts which we have had an opportunity recently to overhaul. The numerous inquiries for our export shale and the orders recently placed on the continent and elsewhere where it is of importance to import gas in a highly concentrated form, as it exists in our shale, or where it can be used instead of oil for enrichment purposes, have given us hopes of being able to realise results within the next year of very considerable importance. With regard to the debentures, at the request of the directors I am preparing a report upon the properties and assets of the company, with valuations, and this will be issued with the prospectus. In the meantime I can assure the shareholders that the assets are of the most ample character and sufficient to give security for far more than the amount proposed. I am very glad the directors have decided to make the issue, as, with this new capital, I can see before us the completion of the full development of an enterprise the value and extent of which it is difficult to exaggerate.

A SHAREHOLDER asked if Mr. Sutherland could inform the shareholders how much shale had been delivered since last June?

Mr. SUTHERLAND, in reply, said that every available ton of export shale that they had on the Torbane property had been delivered since June, and they had now got orders for shale from the Wolgan Valley.

A SHAREHOLDER asked if the protective duty on all imports into Australia was sufficient to prevent the Standard Oil Co. of America being a serious competitor to this company?

The CHAIRMAN said it was rather difficult to answer that question

definitely; but he thought he might say that they considered they would be so protected. They had no desire to increase the price of the oil to the Australian people, and as long as they did not do that the Government were quite desirous of keeping out others who would be in opposition to them.

A SHAREHOLDER said he understood that the directors promised at the last meeting to issue progress reports. If reports were regularly issued he felt sure that it would give confidence to the shareholders generally. With reference to the coal discovery, he asked Mr. Sutherland whether the shareholders might regard the coal industry as a permanent one.

The CHAIRMAN stated that no promise was given at the last meeting to send out progress reports; but he thought they might very well do so, and the directors would consider the matter.

Mr. W. E. HIPPINS suggested that, as the corporation was now making a profit, the directors should consider the question of paying an interim dividend, at all events, on the preference capital, instead of waiting until the next balance-sheet was published.

The CHAIRMAN, in reply, promised that the suggestion would receive the consideration of the board; in fact, he thought he might go further and say that he believed it would be carried out.

Mr. SUTHERLAND, replying to various questions, said that he did not anticipate any difficulty with regard to labour. He had come in contact a good deal with members of the various political parties in Australia, including the labour members, and although he had been most careful to avoid any political connection in any way, he had found them all most reasonable and most anxious to help the corporation, as they realised the benefit the industry would confer on Australia. With regard to the coal deposit, there was not the slightest doubt that the coal extended uniformly with the shale, and therefore there were many millions of tons.

The motion was carried unanimously.

Sir WILLIAM AVERY moved the re-election of Sir George Newnes and Mr. W. Blyth as directors of the corporation.

Mr. D. ELLIOTT ALVES seconded the motion, which was unanimously agreed to.

On the motion of Mr. H. B. BARNETT, seconded by Mr. E. A. RUCKER, Messrs. Josolyne, Miles, and Blow were reappointed auditors.

Sir ROBERT LUCAS TOOTH proposed: "That a hearty vote of thanks be given to the chairman, directors and staff, for the zeal and ability shewn in the conduct of the company's business both in London and Australia." He remarked on the great contrast between the condition of the property now and what it was a few years ago. Formerly it was nothing but bush, without any sign of civilisation; but now they had a railway, works in good going order, and the prospect of very soon reaping the reward of all the care and industry of the management. He was sure the shareholders would agree that they had a most efficient board managing their affairs, and they were greatly indebted to Sir George Newnes for the energy, foresight, and interest he shewed in the company. They also owed a great deal to Mr. Sutherland for his indefatigable and unwearying attention to the business, and they were likewise indebted to the managers and the members of the staff in Australia.

Mr. C. A. IONIDES, seconded the motion, which was unanimously adopted.

The CHAIRMAN, in acknowledging the compliment, said that he was most fortunate in his colleagues, and he was pleased that Sir Robert Lucas Tooth had included the staff in the resolution. As a matter of fact, the corporation possessed a hard working and loyal staff, and the directors appreciated their efforts. Mr. Sutherland had spoken in the highest terms of praise of those who were engaged with him in the work.

An extraordinary general meeting was subsequently held, at which a resolution was passed making various alterations in the articles of association.

The CHAIRMAN explained that the alterations were necessary in order to comply with the requirements of the Stock Exchange Committee.

The proceedings then terminated.

We are informed that a contract for an oil tank steamer of 7,000 tons carrying capacity has been placed with the Greenock and Grangemouth Dockyard Co. by foreign owners. Engines of 3,200 i.h.p. will be constructed by Messrs. J. G. Kincaid and Co., Greenock.

The Speranta Company.—The Speranta Co. made up its accounts for the financial year 1906/7 on November 12th. These accounts shew a gross profit of 260,000 francs, and a net profit of 210,000 francs. The profit is derived exclusively from the royalty received from the Romano-American Co. in respect of the Moreni property. For the first time since its formation the Speranta Co. will distribute a dividend.

NOTES FROM ALL QUARTERS.

RUSSIA.

The Baku Conference.—The opening of the annual conference of Baku petroleum producers has been postponed till the 15/28th of January, 1908.

The Apscheron Petroleum Company, operating at Baku, in 1906, its fifth financial year, has earned a net profit of 48,777 roubles on a turnover of 440,382 roubles.

Nijni Stocks.—The stocks of petroleum products at Nijni-Novgorod on the 1st November (o.s.) were:—Kerosene, 2,240,000 poods; crude oil, 2,885,000 poods; residuals, 22,977,900 poods.

Baku Production.—The production of crude oil at the Baku oil fields during the first 15 days of November (o.s.) amounted to 18,118,311 poods, of which 5,191,404 poods were obtained at Bebe-Aibat. Spouters during this period yielded at Bebe-Aibat 17,000 poods, and at Saboontchi 157,400 poods.

Arrivals at Batoum.—A report from Batoum, dated the 1st of December, mentions an increase in deliveries of kerosene from Baku, due probably to the closing of the season for shipping to the Volga. Business with bulk shipments remains stagnant without any considerable cargoes. The case oil trade shews no change, and owing to restricted shipments the stock of cases has increased.

Caspian Shipowners and Organisation.—Reports are current in interested circles that for the coming navigation the combine of Caspian shipowners will be effectively organised. The majority of the firms have already signed the agreement, the exceptions being Messrs. Merkulieff Bros. and Lboff Bros. These latter refrain from joining the combine, as they are under contract with the Schibaieff Co. to carry their oils for several years to come. It was agreed to divide all the vessels into classes, and each will be allotted to carry a certain quantity during the navigation. Freights will be fixed by the combine.

AMERICA.

The Anse la Butte Field.—The Anse la Butte field in Louisiana is probably the only oil field in the United States where negroes have been employed as drillers.

Another Large Gas Well.—The latest gas well brought in in Muskogee has a capacity for over 3,000,000 cubic feet per day. This fact demonstrates that the Muskogee field is not only rich in oil, but is capable of producing considerable quantities of gas. This is the second large gas well brought in within 10 days.

Security Refinery Shut Down.—It is reported that the efforts on the part of attorneys for the Security Oil Co. to have the injunction against the company modified so as to permit the refinery to resume business have been futile. The refinery at Beaumont is, therefore, practically shut down, and will remain so until the company is enabled to make shipments from the State.

Prolific Oklahoma.—In delivering his address before the Trans-Mississippi Congress, Mr. George W. Barnes spoke upon the subject of the oil industry. He presented statistics shewing the magnitude of the industry and its great importance as one of Oklahoma's greatest sources of wealth. He said:—"With Oklahoma crude moving to the east and to the south, as well as the smaller refineries within its own borders, it can justly be said that Oklahoma will light the world."

ROUMANIA.

Property Purchase.—Mr. Spiro de Lalu is reported to have purchased the property of Mr. Van de Werk at Bustenari for 150,000 francs.

Crude Oil Prices.—The price of crude oil remains unchanged. There is a slightly better demand for illuminating oil for export, but prices remain unaltered. Nor is there any change in the price of benzine.

Messrs. C. M. Pleyte and Company have asked the Ministry of Domains for permission to suspend for three months work on their borehole at Colibasi. The firm are intending to abandon this plot altogether.

A Good Idea.—Mr. N. Flicher, manager of the oil properties of the Aquila Franco-Romana Co., has been invited by the Ministry of Domains to deliver a course of lectures on gas and benzine motors at the Campina School for Boremasters.

The International Company.—The annual meeting of the International Co. took place at Amsterdam on November 30th, when the report and balance sheet for the financial year 1906-7 were adopted and a dividend of 6 per cent. was declared.

Abandoned.—Mr. Raky has entirely abandoned all work at Gura Ocnitza on the property of Mr. B. Marcu, and returned it to its former owner. Mr. Raky has carried out the provisions of the agreement by which he was compelled to drill two wells to a depth of 400 metres.

A New Oil Stratum.—At Valea Popului, near Branesti, in the Dambovitza district, where there are hand wells worked by the Magura Co., an oil stratum was found at a depth of only 17 metres, which yielded between 70 and 120 kilogrammes of oil per day. The presence of the oil there is supposed to be due to infiltration.

Salonica and Roumanian Oil.—Mr. D. C. Penescu, the Roumanian Consul at Salonica, reports that during last year there were imported into Salonica 29,700 tins and 400 cases of Roumanian oil, which was in such a bad condition that it had to be sold at 27-30 piastres per case, instead of 30-33 piastres realised for Russian oil. In course of this year the Steaua Romana shipped to Salonica 3,000 cases and 14,000 tins of Roumanian oil of excellent quality and well packed. This oil was sold on the spot at 28½-28¾ piastres per case, which is 5-15 centimes per case above Russian oil.

Telegraphic Address:—"OLEINE."

Telephone Nos.:—{ 249 & 254 LIVERPOOL.
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GAS OILS MINERAL LUBRICATING OILS, PARAFFIN SCALE AND WAX, PETROLEUM SPIRIT, BENZOLINE AND BENZINE, SWANSDOWN WATER WHITE AMERICAN PETROLEUM.

OUR AMERICAN LETTER.



(From Our Own Correspondent.)

PITTSBURG, December 1st, 1907.

Developments in the lowest South-west fields, since last spoken of in the REVIEW, have not been the least sensational. The work completed has for the most part been of the routine order and principally in the old fields that have been under development for many months.

About the only district to attract any attention is the Berea grit development in Lincoln county. This county is the latest acquisition to the column of producing counties in West Virginia. Attention has been called to its possibilities as an oil-producing district frequently, and for more than six months past the success that has attended development work has more than made good all that was claimed for it and its probable future.

When all of the wells completed have been put to pumping the field will have a production of between 300 and 400 barrels a day. These producers are scattered over a large acreage, and nearly all first tests on as many different farms. The producing formation has proved to be very regular, and when oil was not encountered gas has been found in fair quantities, so that very few total failures have been completed.

The amount of new work starting is the best evidence that the territory is growing in favour. The average size of the wells is not large, but after they have settled down are very steady producers, and in the end are more profitable than the flashy kind. Wildcatting had been practised at intervals in this county prior to the present year and the result was not the least satisfactory. This is now changed and nearly every well drilling is a test for some particular locality.

What has been accomplished in the way of finding new production in Lincoln county has inspired new work in adjacent counties. Operators are now looking for a pool in Kanawha county, but up to this time nothing better than gassers have been found. There are now three wells drilling and starting.

Clay county is another that is not being overlooked. So far as tested no wells have been completed that have produced oil in paying quantities. Barbour county has been tested in the past, and on several occasions it looked like it had a future. So far as known it has but one test drilling at this time.

The recent completions in the old districts have been fewer in number and smaller in production than for some time. The deep sand territory in Monongalia county failed to furnish anything better than fair producers and quite a number fell to the duster list. The big producer of Cochran, Funk and Co., on the G. W. Hixenbaugh farm, was the incentive for starting a lot of new work two months ago. These wells are now in or due in the sand and none approach the Hixenbaugh in size, and some choice locations presented dusters.

It is almost certain that the work not fully completed will have to make a better showing than the recent tests or there is certain to be a decline in operations. The

A COMPREHENSIVE REVIEW
OF THE LATEST
DEVELOPMENTS. . . .



discovery of some new and prolific producing territory would bring activity to that particular locality. Such a contingency, however, is not likely to arise any more this year. In the shallow sand districts, not too remote from the railroads, development work will continue for some months or till such time as the roads get in such a condition that the expense of getting material to the fields is burdensome. The cost in that case is an item to be considered.

In Ritchie county operators are still hopeful of finding new pools or extensions to the old districts. There is considerable salt sand territory that has not been closely tested. An occasional good producer in that stratum keeps up interest and stimulates the search for more.

Operators on the Ohio side are quite active, despite the fact that a very small percentage of the completions are better than light pumpers. The expense of drilling is comparatively light, and this is one reason why there is so much work under way. Dry holes are of frequent occurrence, but the loss is not heavy in the shallow sand districts.

Near Bremen, in Fairfield county, the Clinton Lime district is still the most interesting section on the Ohio side. In the Rushville end of the development a light producer was completed in the Clinton Lime during the week. At Rushville and near Bremen there is some new work starting. The Bremen Gas and Oil Co. and the Rushville Gas and Oil Co. are responsible for the discovery of the oil-producing wells. Both were prospecting for gas when they found a deposit of oil in the Clinton formation.

Near Newport, in Washington county, there is still a chance for a Keener sand pool. The Pure Oil Co. has completed a second test on the Yeddo farm, and got a very creditable producer in the Keener formation. The first well on this farm was drilled last year and caused some excitement at the time. Subsequent tests in the same vicinity proved very light or dry.

In the Clear Fork and Woodsfield districts, in Monroe county, there is a good deal of work of the routine order. A good deal of this work consists of drilling over territory that has room for additional locations. At and near Jerusalem, in the same county and along the Belmont county line, a few good producers called out some new work, but the late completions have been very light or proved failures.

In experimental work Jefferson county is still in the lead. One of the surprises in this county has been the drilling in of a 40-barrel producer in advance of the old Wills Creek pool. The hope of connecting up Jefferson county with the Congo district on the West Virginia side has been abandoned. Quite a number of wells were drilled with that end in view, but they proved failures.

There is nothing in the local fields to stimulate development work. The old Brush Creek field, in Allegheny county, is still favoured with as much or more new work as any of the local fields. It is the exception when a producer is secured that is better than an average pumper.

IMPORTANT OIL STRIKE IN THE LOUISIANA FIELD.

Our contemporary, the *Oil Investors' Journal*, in its recent issue, gives the following details concerning the remarkable well brought in a month ago by the Lake Oil Co. at Anse la Butte, La., 40 miles east of the Jennings field, and now producing over 3,000 barrels daily. It appears that the well is 1,850 feet deep, and the oil is coming up through a four-inch pipe, on the end of which there is 120 feet of strainer.

The well is cased to 650 feet with six-inch pipe. It was drilled from that depth with four-inch, no effort having been made to set casing on top of the pay sand, which, according to the best information obtainable, was found at about 1,730 feet and penetrated to a total depth of 120 feet. The drill went into the pay formation about the middle of October, and more than 20 days were pent going through it.

Both good workmanship and good luck figured in the finishing of the well. Ordinarily it would be considered next to impossible to complete a well with one string of pipe and shut off the water, as has been done in the case of this hole. It is

stated that the strainer—No. 40 Keystone—was screwed on to the four-inch pipe and a gunny sack wrapped around the top of the screen to make a tight joint above the sand. The wash pipe was lowered into the well, and when the upper portion of the strainer had been cleaned out the oil appeared, going

over the derrick. This was on the morning of November 14th. An elbow was screwed on to the four-inch pipe and the well was permitted to flow into the ditch. It gained in strength and volume perceptibly, and up to the morning of November 19th shewed no signs of weakening, but on the contrary seemed to be improving. The flow is steady, in a solid stream, and with the wash pipe out of the hole there is every reason to believe that the production would be increased.

The oil is being pumped from the pit into an earthen tank on the lease of the Lake Oil Co. about 200 feet from the well. This reservoir was built about two years ago and has a capacity of about 25,000 barrels. As the oil is not being run into measuring tanks there is no means of getting an accurate gauge on the well, but no one has estimated the flow at less than 3,000 barrels, and many think it will top 4,000 barrels. In the five days from November 14th to 19th the ground tank was filled to the brim, and the embankment is now being raised to increase the capacity.

The four-inch pipe line of the Evangeline Oil Co., from the Jennings field to the Atchafalaya river, a distance of 56 miles, passes within 1,500 feet of the new well, and a lateral line has been laid down from two

1,200-barrel settling tanks on the Lake company's lease to enable the Evangeline company to handle the oil. These two tanks were filled before the oil was diverted to the ground reservoir. Anse la Butte oil is now going into the Evangeline line, the pumps at the field station of the Heywood Bros. Oil Corporation and Lake Oil Co.'s pipe line to Breaux Bridge being temporarily used for the purpose. There is a pumping station on the Evangeline line at Breaux Bridge, three miles east of Anse la Butte. From Breaux Bridge to the terminus at Butte la Rose, an arm of the Atchafalaya, the distance is nine miles. The last six miles of the line is six-inch. At Butte la Rose oil from the Evangeline line is loaded on barges and transported in this manner to Plaquemine, on the Mississippi river, 15 miles below Baton Rouge and less than 100 miles above New Orleans. The Evangeline company has two 55,000-barrel steel tanks and one 10,000-barrel steel tank at Plaquemine. Deep water at this point affords loading facilities for ocean-going vessels. Tank steamers have taken a number

of cargoes from Plaquemine to Atlantic coast points in the past, and if Anse la Butte develops a large production, which seems likely, it will make a convenient shipping point. The sugar plantations and manufacturing plants along the Mississippi, and industries at New Orleans, have been heavy consumers of

fuel oil since the early development of the Gulf Coast fields. The Evangeline company is taking the Anse la Butte oil at "the market price."

The Lake Oil Co. and Heywood Bros. Oil Corporation jointly own and operate a four-inch line from Anse la Butte to Breaux Bridge, where they have a loading rack on a branch of the Southern Pacific railroad, and facilities for loading barges on the Bayou Teche, which is navigable, and which passes through the richest section of the Louisiana sugar country, affording an excellent market for fuel oil. The deliveries through this line, representing the surplus production of the pumping wells, at Anse la Butte over and above the fuel requirements on the field, have amounted to about 1,000 barrels a month at certain seasons of the year. The line was built two years ago.

The field is intersected and surrounded by the lines of the Southern Pacific railroad. The main line of this road at Lafayette is five miles distant to the west, but the new Baton Rouge cut-off, which joins the main line at Lafayette, passes within 500 feet of the lake well, to the north. Loading racks will probably be built on the Baton Rouge road in the very near future,



A VIEW IN THE ANSE LA BUTTE FIELD.

The American Oil Market.

New York, Week ended Dec. 7th.

Fourth sand operations in Wetzel county, West Virginia, have been attended with gratifying results, and practically no other district in the lower South-west fields offers the same encouragement for the prosecution of work during the winter. A good producer in the Church district, which late last week started at the rate of 20 barrels an hour, has shewn a material decline during the interval, but even at the rate of 135 barrels a day it forms a creditable exception to the rule of recent completions. Other tests in the deep sand formation of the district have also yielded encouraging indications of oil in paying quantities. The Congo pool in Hancock county in the same State, says the *Oil, Paint and Drug Reporter*, attracted interest again in the bringing in of two wells in the Berea grit, which were considered promising, one for 40 and the other for 20 barrels. Quiet conditions prevail in the Lima field of north-western Ohio and Indiana, and operations are likely to be restricted during the winter. November completions on the Ohio side were well up to the average, numbering 75, but the new production was reduced by nearly one-half, 527 barrels against 1,012 barrels in October. Last month's record of abandoned wells totaled 160, the heaviest so far this year. The Indiana showing for November is more creditable. Completions were fewer than in October and the new production smaller, but the average per successful well was sustained to the October record of 10½ barrels. In the State 178 wells were abandoned last month. The Illinois summary for November presents somewhat of a surprise in the extent of field operations, the completions surpassing those of the two previous months. The new production aggregated 9,780 barrels, against 8,157 barrels during October, and the average per successful well was raised to 28 barrels. Our correspondent in the Kentucky-Tennessee field writes that operators in Kentucky are determined to test thoroughly a tract extending more than 100 miles which may establish a link in the Illinois and Indiana formations. November field operations in Kentucky and Tennessee were without special interest beyond a slight gain in the average per successful well. The financial disturbance is held responsible to a large extent for the check to operations in the Mid-Continent field during November, the month's summary indicating that 421 wells were drilled, or 79 below the October total, with 8 fewer gassers and 20 more failures, bringing the reduction in producing wells to 91. The new production for November is placed at 26,355 barrels, an average of about 77¾ barrels per successful well. In October, 430 wells out of 500 drilled yielded a new production of 35,769 barrels, an average of about 83½ barrels per well. The halt in operations, our correspondent suggests, is likely to have a beneficial effect on the industry, as the zeal with which work had been pushed was overtaking the resources of the territory and operators, and inviting an unfavourable market for the product. The Delaware pool in Oklahoma has attracted keen interest. Our correspondent telegraphs the pipe line company operating to the Gulf Coast has cut the price of Glenn pool crude from 41 to 35 c., and the lead will probably be followed by the leading Mid-Continent concern. Advices from California note a considerable increase in production during November over the previous month, the Santa Maria field contributing the record total of 1,250,000 barrels. Despite the heavy gain, there were no surplus stocks at the close of the month, and the tendency was stronger toward higher prices.

REFINED AND PRODUCTS.—The heavy movement in refined for export has been the only item to distinguish the local market during the week. The aggregate of 13,344,520 gallons has been reached, 7,904,250 gallons being shipped in bulk. Our record for the previous week shewed clearances of 9,627,370 gallons (6,763,820 gallons in bulk). There has also been the occasion for additional chartering engagements reported during the week being 165,000 cases. Quotations have remained

on an even basis, the tendency of the market being considered as one of well maintained stability. The market for the products has remained uneventful during the interval, with the demand generally of moderate proportions. Quotations have undergone no change, and the continued firmness of high-grade crude imparts a corresponding influence on values. The export movement in naphtha shews a further decline, the aggregate for the week being 25,900 gallons, against 84,250 gallons during the previous week. Residuum has been moving more freely for export clearances for the week, shewing a total of 29,910 gallons.

CLOSING QUOTATIONS

	CRUDE.	Week ended	
		Nov. 30. 1907.	Dec. 7. 1907.
	In cents per gallon.		
Pennsylvania crude in bbls.		8.20	—
Pennsylvania crude in bulk		4.75	—
Residuum, bbls. for export		6@6½	—

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Nov. 30. 1906.	Dec. 7. 1907.
Pennsylvania		\$1.64	\$1.78
Tiona		1.74	1.78
North Lima		0.98	0.94
South Lima		0.93	0.89
Indiana		0.93	0.89
Illinois, heavy, below 30 deg.		—	0.60
Kansas and Indian Ter., 32 deg. and above		0.54	0.41
Heavy		—	0.28
Humble, Tex.		—	0.77
Saratoga		—	0.75
Sour Lake, Tex.		—	0.79
Jennings, La.		—	0.74
CANADIAN OIL:			
Petrolia		1.37	1.34
Oil Springs, less pipeage		1.44	1.41

REFINED—FOR EXPORT.

		Week ended	
		In cents.	Dec. 7.
		S.W.	W.W.
Barrels, cargo	per gal.	8.75	@10.75
Philadelphia		8.70	@10.70
Bulk, New York		5.00	@ 7.00
Bulk, Philadelphia		4.95	@ 6.95
Cases, New York		10.90	@13.90
Cases, Philadelphia		10.85	@13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Nov. 30. 1907.	Dec. 7. 1907.
3,000 to 10,000		11.05	11.05
1,000 to 3,000		11.10	11.10

NAPHTHA AND GASOLENE.

		Week ended	
		Nov. 30.	Dec. 7.
Naphtha, crude, car. lots, 68 @ 72 deg.		15.00	15.00
Gasolene, 86 deg.		24.00	24.00

PENNSYLVANIAN OIL RUNS from Nov. 26th to Dec. 2nd were:—Nov. 26th and 27th, 140,187; Nov. 28th, 195,198; Nov. 29th and 30th, 184,170; Dec. 1st, 15,932; and Dec. 2nd, 72,707.

THE DELIVERIES OF PENNSYLVANIA OIL from Nov. 27th to Dec. 3rd were:—Nov. 27th and 28th, 408,383; Nov. 29th, 288,305; Nov. 30th, 171,612; Dec. 1st, 123,514; Dec. 2nd, 147,673; and Dec. 3rd, 230,606.

CLEARANCES FOR THE WEEK.

During the week ended Dec. 6th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.	Year.	1906.
Refined	13,344,520	456,927,885	435,714,218	
Crude	7,500	2,485,395	235,000	
Naphtha	25,900	10,728,150	14,751,984	
Residuum	29,910	2,737,007	4,304,100	

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

		Gallons.	
From New York, week ended Dec. 6th		17,800,193	
Total from New York, from Jan. 1st, 1907 ..		661,811,570	
Same period last year		582,044,706	
Increase		79,766,864	
From United States, week ended Dec. 6th ..		20,911,840	
Total from United States, since Jan. 1st, 1907		1,194,716,938	
Same period last year		1,078,258,768	
Increase		116,458,170	

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The "Review" Shipping List.

DECEMBER 20, 1907.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	London	Southampton	L. Dec. 16	EXCELSIOR	New York ..	Hamburg ..	Arr. Dec. 17
ALICE ISABELLE..	Philadelphia	Sables	P. Del. Break.,	EZIO	—	—	Coasting Peru
		d'Olonne	Dec. 8	FRANCE MARIE ..	Philadelphia	Marseilles ..	P. Gibraltar,
ALEMBIC	New York ..	Shoreham ..	L. Nov. 27				Dec. 12
AMERICAN	New York ..	Antwerp	L. Dec. 7	GEESTEMUNDE ..	Tyne	Philadelphia	P. Dunnet Head,
APPALACHEE	Calcutta	Boston &	L. Nov. 20				Dec. 16
		New York		GENESSE	London and	New Orleans	L. St. Michael's,
APSCHERON.....	Genoa	Batoum	L. Dec. 12		Tyne		Dec. 6
ARAL.....	Philadelphia	Tuborg	Arr. Dec. 13	GEORGIAN	Tyne	New York ..	L. Dec. 15
ARAS.....	New York ..	Hamburg ..	L. Dec. 6	PRINCE			
ARGYLL	—	—	Coasting U.S.	GOLDMOUTH	Singapore ..	—	L. Dec. 7
			(Pacific)	GUTHEIL	Philadelphia	Konigsberg..	L. Dec. 10
ASHTABULA	San Francisco	Shanghai ..	Arr. about Dec. 2	HAINAUT	Antwerp	Alexandria..	Arr. Dec. 8
ASTRAKHAN.....	Hamburg	Philadelphia	P. Dunnet Head,	HARRY	Port Arthur	Manchester	L. Norfolk (Va.),
	and Tyne		Dec. 2	WADSWORTH	(Texas)		Dec. 4
ATLAS	—	—	Coasting U.S.	HELIOS.....	Nordenhamn	New York ..	P. Dunnet Head,
			(Pacific)		and Tyne		Dec. 6
AUGUSTA	Liverpool ..	Kustendje ..	L. Constant'ple,	HOTHAM	Middlesbro'	New York ..	L. Dec. 10
			Dec. 12	NEWTON			
AUGUST KORFF..	Avonmouth	Philadelphia	L. Dec. 5	HOUSATONIC	Bengkalis ..	Nordenhamn	P. Beachy Head,
AUREOLE	New York ..	Lisbon	At Lisbon,				Dec. 18
		& Oporto	Dec. 16	IMPERIAL	—	—	Tr. on Lakes btn.
AZOV.....	—	—	Trading on W.C.				U.S.A. and Can.
			of South Amca.	IOANNIS COUTZIS	Cardiff.....	Piræus.....	Arr. Dec. 7
BAKU STANDARD	Rouen	Philadelphia	At Queenstown,	IROQUOIS	London	Philadelphia	Arr. Dec. 17
			Dec. 13	J. B. AUG. KESSLER	Thameshaven	Philadelphia	L. Portland,
BALAKANI	Port Arthur	Rotterdam ..	Arr. Dec. 16				Dec. 11
	(Texas)			JAMES BRAND	Philadelphia	London	Sp. Dec. 9, 42 N.
BATOUM.....	Karatzu	Singapore ..	Arr. Nov. 7				61 W.
BAYONNE	Philadelphia	Algiers	P. Del. Break.,	JULES HENRI	Marseilles ..	Philadelphia	L. Dec. 15
			Nov. 29	KURA	Philadelphia	Hull	P. Del. Break,
BEACON LIGHT ..	Rotterdam ..	Philadelphia	P. Scilly,				Dec. 7
			Dec. 14	LA CAMPINE.....	Antwerp	Philadelphia	Off the Wight,
BEME	Bombay	Rangoon	L. Oct. 22				Dec. 13
BLOOMFIELD	Batoum	London	P. Sagres,	LA FLANDRE	Antwerp	Philadelphia	P. Lizard,
			Dec. 17				Dec. 7
BORJOM	Batoum	Alexandria..	Arr. Dec. 7	LA HESBAYE.....	Antwerp	Philadelphia	L. Dec. 18
BRILLIANT	Copenhagen	Tyne	L. Dec. 17	LA MADELEINE ..	Algiers	Brest	Arr. June 16
BROADMAYNE	New York ..	Bordeaux ..	L. Dec. 5	LA VIGUESA	Corunna	Ferrol	L. Nov. 23
BULLMOUTH	Yokohama ..	Shanghai ..	L. Dec. 11	LACKAWANNA....	Philadelphia	Savona	L. Algiers,
BULYSSES	New York ..	Madras	At Port Said,				Dec. 12
			Dec. 14	LANSING.....	Seattle.....	San Francisco	Arr. Nov. 27
BURGERMEISTER	Hamburg ..	New York ..	P. Dunnet Head,	LE COQ.....	Santander ..	Philadelphia	Arr. Dec. 17
PETERSEN			Dec. 8	LOUTSCH	—	Batoum	Arr. Nov. 30
CALCUTTA.....	San Francisco	Shanghai ..	L. Oct. 28	LUCERNA	Port Talbot	New York ..	Arr. Dec. 7
CAPTAIN A. F.	London	Port Arthur	P. Sand Key,	LUCILINE	Rouen.....	New York ..	Arr. Dec. 10
LUCAS			Nov. 29	LUMEN.....	Port Talbot	Port Arthur	L. Nov. 27
CARDIUM	Thameshaven	Cardiff	Arr. Dec. 6			(Texas)	
CATANIA	Seattle.....	San Francisco	P. Tatoosh,	LUX	Seville.....	Kustendje ..	At Gibraltar,
			Dec. 2				Dec. 18
CAUCASIAN	Port Arthur	Hamburg ..	L. Newport News	MANHATTAN	Barry	New Orleans	Arr. Dec. 1
	(Texas)		Dec. 9	MANNHEIM	New York ..	Amsterdam..	L. Dec. 5
CHARLOIS	Rotterdam ..	New York ..	Arr. Dec. 17	MARGARETHA ..	Kustendje ..	Hull.....	L. Constant'ple,
CHESAPEAKE	Aroe Bay ..	Philadelphia	Sp. Dec. 12, 36 N.				Dec. 13
			13 W.	MAVERICK.....	Seattle	San Francisco	Arr. Oct. 6
CHESTER	New York ..	Antwerp	Arr. Dec. 18	METEOR.....	Batoum	Vladivostock	At Singapore,
CIRCASIAN	Caleta Buena	Callao	L. Oct. 3				Dec. 5
PRINCE				MEXICAN PRINCE	Tyne	Constant'ple	Off the Wight,
CLAM	Balekappan	Singapore ..	Arr. Nov. 13				Dec. 6
COL. E. L. DRAKE	Astoria	San Francisco	Arr. Nov. 27	MIRA	Tyne	Batoum	L. Dec. 13
COWRIE	New York ..	Venice.....	L. Algiers,	MUREX.....	Singapore ..	Shanghai ..	L. Dec. 4
			Dec. 14	NARRAGANSETT..	London	New York ..	Arr. Dec. 8
CUYAHOGA	Philadelphia	Manchester..	Arr. Dec. 18	NERITE	—	—	Tr. in China
CYMBELINE	New York ..	Avonmouth..	L. Dec. 8				Seas
CZAR NICOLAI II.	Hamburg ..	Batoum	P. Dungeness,	NEW YORK	Southampton	New York ..	In Wireless Com.,
			Dec. 14				Brown'd, Dec. 16
DAGHESTAN.....	Rouen.....	Swansea	Arr. Dec. 16	OCEAN	Kustendje ..	England	L. Dec. 11
DAKOTAH	Singapore ..	San Francisco	Arr. Dec. 6	OILFIELD ..	Rouen.....	New York ..	Arr. Dec. 8
DELAWARE	London	New York ..	P. Scilly,	ORANJE PRINCE..	Tyne	Manzanillo	L. Dec. 7
			Dec. 15			& Ensenada	
DEUTSCHLAND ..	Rotterdam ..	New York ..	P. Prawle,			de Morra	
			Dec. 10	ORIFLAMME	Rouen.....	Philadelphia	P. Scilly,
DIAMANT	Philadelphia	Christiana ..	L. Dec. 14				Dec. 11
EDWARD	Antwerp ..	Middlesboro	Arr. Dec. 13	OSCEOLA	Wilmington	Bremen	Arr. Dec. 18
DAWSON				OTTAWA	Philadelphia	Manchester	P. Reedy Island,
ELAX.....	Kustendje ..	Kurrachee	P. Aden,				Dec. 5
		& Bombay	Dec. 8	OURAL	Philadelphia	Hamburg ..	P. Scilly,
ELISE MARIE	Danzig	New York ..	L. Tyne,				Dec. 16
			Dec. 17	PALEMBANG	Hong Kong..	Palembang..	L. Oct. 24
ENERGIE	Philadelphia	Danzig	L. Dec. 10	PAULA	Hamburg ..	Philadelphia	P. Dunnet Head,
ERIVAN	Batoum	Manchester	Arr. Dec. 18				Dec. 12
ETELKA	Philadelphia	Cette	Arr. Dec. 12	PECTAN	London	Emden &	L. Tyne,
EUPLECTELA	Tientsin	Balekappan	L. Dec. 7			Galveston	Dec. 13

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PENNOIL.....	Philadelphia	Rotterdam ..	Arr. Dec. 17	SOYO MARU	Antwerp	San Francisco	L. St. Vincent
PERLAK	Madras	Aroe Bay ..	L. Nov. 22				(C.V.), Nov. 15
PHOEBUS	Hamburg ..	New York ..	In Tyne, Dec. 17	SPONDILUS	Hamburg ..	Tyne	Arr. Dec. 16
			Dec. 17	STANDARD	Tyne	Philadelphia	Arr. Dec. 15
PINNA	Port Harford	Yokohama ..	L. Gaviota, Nov. 27	STROMBUS	Samboe	Rotterdam ..	In Downs, Dec. 17
POTOMAC	New York ..	Copenhagen	L. Dec. 3	SURAM.....	Batoum	Amsterdam..	L. Constant'ple, Dec. 10
PROMETHEUS....	Hamburg ..	New York ..	P. Dunnet Head, Dec. 10	SUWANEE	Barrow	Philadelphia	Arr. Dec. 9
PRUDENTIA	Balekpappan	Palembang..	Arr. Nov. 11, for Calcutta	SVIET	Alexandria..	Batoum	P. Dardenelles, Dec. 2
QUEVILLY	Rouen.....	Philadelphia	L. Nov. 15	TELENA	New York ..	Savona	L. Dec. 6
RION.....	Philadelphia	Foynes	P. Del. Break., Dec. 4	TEREK.....	Port Arthur (Texas)	London	L. Newport News, Dec. 14
ROCK LIGHT	Kustendje ..	Dublin	L. Constant'ple, Dec. 16	TIFLIS	Batoum	Antwerp	P. Constant'ple, Dec. 13
ROMANY.....	Kustendje ..	Kurrachee ..	P. Perim, Dec. 14	TIOGA	Galveston ..	Philadelphia	L. Dec. 7
ROSSIJA	Tyne	Pensacola ..	L. Dec. 11	TONAWANDA	San Francisco	Hong Kong	L. Dec. 5
ROTTERDAM	Calcutta	Boston & New York	At Boston, Dec. 14	TROCAS	Hankow	Shanghai ..	Arr. Dec. 3
RUSSIAN PRINCE	Tampico	Philadelphia	L. Dec. 3	TURBO.....	Batoum	Hamburg ..	L. Dec. 18
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	TUSCARORA	Liverpool ..	Kustendje ..	L. Constant'ple, Dec. 13
SAN CRISTOBAL..	Philadelphia	Rouen	P. Del. Break., Dec. 7	TWINGONE	Rangoon ..	Madras	Arr. Nov. 27
SAN IGNACIO	Pasages	Philadelphia	L. Nov. 7	VEDRA.....	Palembang..	Yokohama ..	L. Dec. 3
DE LOYOLA				VILLE DE DIEPPE	Philadelphia	Rouen	Arr. Dec. 14
SAXOLEINE	Tyne	Philadelphia	L. Dec. 18	VOLUTE	Balekpappan	Singapore ..	Arr. Dec. 5
SEMINOLE.....	San Francisco	Tongkee	Arr. Nov. 22	WASHINGTON....	Rotterdam..	New York ..	P. Beachy Head, Dec. 3
SINGU	—	—	Tr. in East Indies	WEEHAWKEN	Tyne	New York ..	P. Dunnet Head, Dec. 2
SNOWFLAKE.....	Rouen	Penarth	Arr. Dec. 13	WILLKOMMEN....	Philadelphia	Stockholm ..	P. Del. Break., Dec. 7
				WINNEBAGO	San Francisco	Canton	At Moji, Dec. 3

SHIPPING CASUALTIES.

The recent storms round our coasts have played havoc with not a few oil-carrying vessels. Last Sunday the seven-master schooner "Thomas W. Lawson," bound from Philadelphia to London with a cargo of 2,000,000 gallons of Texas oil, became a total wreck on the rocks off Scilly. A week ago also the oil tanker "Cardium," while proceeding from Cardiff, where she had discharged her cargo, collided with another vessel, and sustained considerable damage, while on the same day—December 13th—the "Baku Standard," from Rouen to Philadelphia, put in at Queenstown, having sustained damage which will necessitate her being placed in dry dock.

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

December 20th, 1907.

The price of Russian and Roumanian Petroleum is slightly lower, but the Roumanian has hardened. The latest prices are:—For Russian, 6³/₈d.; American, 7¹/₈d.; Water White, 8¹/₈d.; Roumanian, 6³/₄d.

LUBRICATING OILS

are unaltered as follows:—

- American pale, £7 7s. 6d. to £11.
- American dark cylinder, from £9 2s. 6d.
- American filtered cylinder, from £11 19s. 6d.
- No. 1 Russian, £10 5s.

TURPENTINE.

American has been very weak, and prices seem to be going lower and lower, but doubtless this will change in the spring when the demand recommences. For Spot it is quoted at 33s. 9d., and for the first four months of next year, 35s.

LIVERPOOL OIL MARKET.

December 19th.

Refined oils are quiet, and sellers quote 6³/₄d. for Russian, Galician or Roumanian; and 7¹/₄d. to 8¹/₄d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0¹/₂d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, December 19th.

Refined, in cases, is steady at 10.90; Standard White, 8.75; Credit balances, 1.78c.

PHILADELPHIA, December 19th.

Standard White is still quoted at 8.70.

RUSSIA.

BAKU, December 16th.

The Baku oil market is more quiet. Crude oil, spot, 25³/₄ copecs per pood. Crude, delivery during five months, 25 copecs; kerosene, in waggons, delivery December-January, 34¹/₂ copecs; Nobel Bros. sold to the Transcaspian railway 6,250,000 poods residuals at 30.45 copecs, delivered during six winter months, and 32 copecs, delivered during navigation season.

BELGIUM.

ANTWERP, December 14th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, December 14th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34.25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, December 14th.

The kerosene market is more firm. The price of American Standard White is 7.55 marks per 50 kilos; Russian, 7.35 marks.

ROUMANIA.

December 14th.

Crude oil from different fields, including	Franks.
pipe line charges, per 100 kgs. ...	3'90-4'05
Refined oil, exclusive of taxes ...	5'50-7'00
Motor benzine, including taxes ...	23'00-24'00
Benzine, doubly refined ...	25'00-26'00
Residuals in tank waggons, at refinery ...	3'60-3'80
Paraffin ...	120'00-125'00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	6'75-7'00
Benzine, sp. gr. 0.710-0.715 ...	20'00-21'00
„ sp. gr. 0.715-0.720 ...	19'00-20'00
„ sp. gr. 0.730-0.740 ...	15'00-15'50
„ sp. gr. 0.745-0.755 ...	12'00-13'00

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IMPORTS of PETROLEUM into UNITED KINGDOM

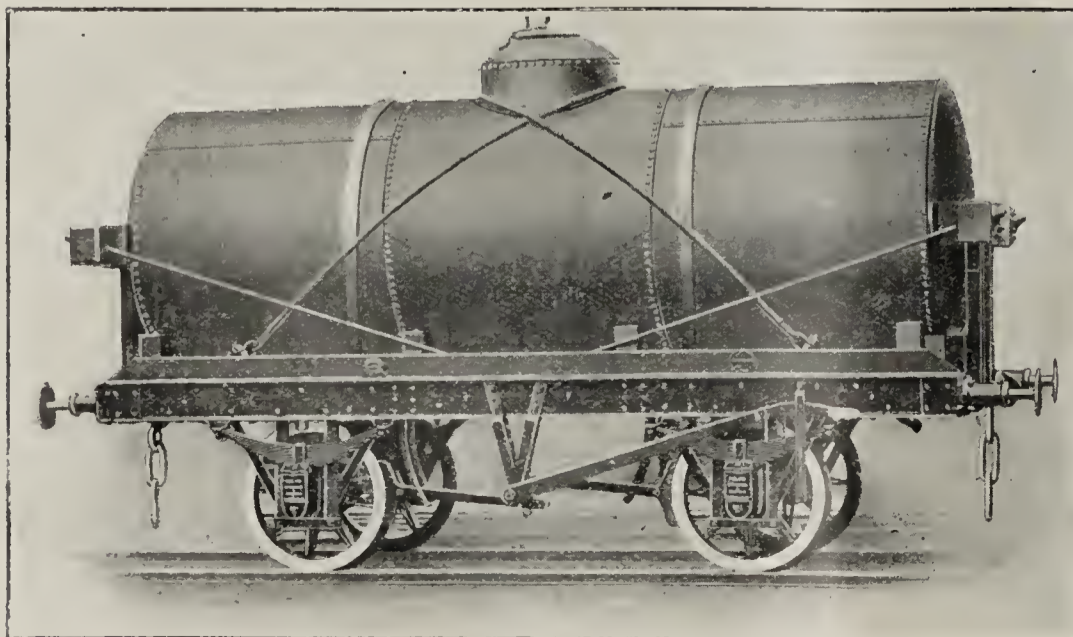
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FOR THE WEEK ENDED 9TH DECEMBER, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
Dec.	LONDON—			
3	B. Jacob and Sons	Lub.	4,100	Philadel.
3	Lubricating & Fuel Oils, Ltd.	"	2,460	"
3	Fielder, Hickman and Co. ..	"	7,400	New York
3	London and India Docks Co.	"	3,650	"
4	Scott's Wharf	"	4,800	"
4	W. H. J. Alexander.. ..	"	2,000	"
4	Anglo-American Oil Co.	Naph.	688,530	"
	J. B. Aug Kesler			
4	"	Benzine	1,055,780	"
4	"	Lub.	33,760	Philadel.
4	London and India Docks Co.	"	360	Hamburg
5	J. C. Goodall.. ..	"	4,200	Antwerp
5	Union Lighterage Co.	"	13,500	Philadel.
5	Anglo-American Oil Co.	"	67,960	New York
5	J. Harrison	Lub.Gr.	150	Antwerp
6	Page, Son and East	Lub.	400	"
6	Mordaunt Bros.	"	4,200	Philadel.
6	Anglo-American Oil Co.	Lamp	1,284,030	Baltimore
	(Delaware)			
7	T. H. Lee	M. Lub.	1,210	Hamburg
7	G. and H. Green	Drilling Comp.	4,470	New York
7	J. Spurling	Lub.	240	"
7	A. Brown and Co.	Lamp	4,000	Philadel.
7	"	"	4,800	"
7	T. S. Harris and Co.	"	3,030	"
9	E. J. Walkenshaw	"	5,200	"
9	Worthington and Boler ..	M. Lub.	5,000	"
9	Ragosine and Co.	Lub.	4,866	"
9	C. Price and Co.	"	4,069	"
9	Lubricating & Fuel Oils, Ltd.	"	8,528	Hamburg
9	Scott's Wharf	M. Lub.	2,000	New York
9	Bryce and Rumpff	"	42	Bremen
9	Page, Son and East.. ..	Lub. Gr.	80	Antwerp
	LIVERPOOL—			
3	Bramwell, Fern and Co. ..	Lub.	680	New York
3	Ismay, Imrie and Co.	"	200	"
7	Meade-King, Robinson & Co.	M. Lub.	7,000	Baltimore
9	Huxley and Co.	Lub.	2,500	"
9	J. T. Fletcher and Co.	"	112	Antwerp
9	Penwarden and Jackson ..	M. Lub.	200	"
9	C. W. Field	"	329	"
9	Burnaby and Chantrell ..	Lub. Gr.	1,792	New York
9	Liverpool Warehousing Co.	M. Lub.	320	"
9	Vacuum Oil Co.	Lub.	13,040	"
9	"	Lub. Gr.	2,600	"
9	"	Lub.	1,600	"
9	Valvoline Oil Co.	M. Lub.	5,740	"
9	W. Gibson and Sons	Lamp	2,050	Boston
9	Pickfords, Ltd.	M. Lub.	74	Hamburg
9	"	M. L. P.	62	"
	BRISTOL—			
3	Anglo-American Oil Co. ..	Lamp	1,188,390	New York
	(August Korff)			
3	"	Lub.	175,960	"

DATE Dec.	PORT AND IMPORTERS	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
3	First Anglo-Russian Oil Co.	Lub.	4,580	New York
3	Pickford's	"	1,350	Hamburg
4	"	"	310	Antwerp
5	H. R. James and Sons ..	"	6,400	New York
6	Anglo-Bosphorus Oil Co. ..	Lub. Gr.	2,000	Hamburg
	GRIMSBY—			
3	J. Sutcliffe and Son.. ..	Lub.	280	Antwerp
6	"	"	80	"
	WEST HARTLEPOOL—			
3	W. Hartlep'l Steam Nav. Co.	"	120	Hamburg
	HARWICH—			
3	D. Howard	"	110	Antwerp
3	"	"	560	"
4	"	"	160	"
5	"	"	320	"
6	"	"	40	"
7	"	"	140	"
	HULL—			
3	T. Wilson, Sons and Co. ..	"	5,600	St. Petersburg
3	Wilsons and N.E. Railway Shipping Co.	"	280	Hamburg
3	"	"	840	"
3	Hull & Netherlands S.S. Co.	Tar Oil	3,240	Rotterdam
3	"	"	2,400	"
4	T. Wilson, Sons and Co. ..	Lub.	8,120	Antwerp
4	"	"	12,560	New York
4	"	"	15,400	"
5	"	"	160	Hamburg
5	Hull and Neth. S.S. Co. ..	Tar oil	3,240	Rotterdam
6	Wilsons and N.E. Railway Shipping Co.	Lub.	360	Hamburg
6	Hull & Netherlands S.S. Co.	Tar Oil	2,400	Rotterdam
7	W. Gilyott and Co.	M. Lub.	22,400	New York
7	Wilsons and N.E. Railway Shipping Co.	Lub.	2,000	Hamburg
7	"	"	1,360	Antwerp
9	"	"	240	"
	MANCHESTER—			
4	J. T. Fletcher and Co. ..	M. Lub.	320	"
6	Manchester Liners	Lub. Gr.	2,040	Philadel.
6	"	"	840	"
7	"	M. Colza	1,200	"
9	Meade-King, Robinson & Co.	M. Lub.	4,000	Antwerp
9	"	"	37,600	Philadel.
9	"	"	22,000	"
9	Crew, Levick and Co.	"	20,944	"
9	Lamport and Holt	"	310	New York
	MIDDLESBRO'—			
6	E. Harris and Co.	"	800	Antwerp
	NEWCASTLE—			
7	Tyne-Tees S.S. Co.	R. M. Lub.	6,200	"
	PLYMOUTH—			
3	T. Nicholson and Co.	Lub.	80	Hamburg

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LONDON, E.C.

DEPOTS & AGENTS EVERYWHERE IN THE UNITED KINGDOM.

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Dec.	SOUTH SHIELDS—			
3	Hawthorn, Leslie and Co. (Linsah)	Fuel	81,670	Amsterdam
	SWANSEA—			
3	E. T. Agins	Lub.	240	Hamburg
4	Burgess and Co.	L. Paste	45	"
9	Richards, Turpin, and Co..	"	4,800	New York
9	"	"	2,400	"
9	W. A. Wood	"	1,200	"
	ABERDEEN—			
9	R. Cannon, Reid and Co. ..	Lamp	1,400	Hamburg
	GLASGOW—			
9	Anchor Line	Lub.	21,720	New York
9	Clyde Shipping Co.	"	160	Antwerp
9	"	Lamp	440	"
9	J. and A. Allan	Lub.	74,720	Philadel.
9	"	M. Colza	12,500	"
9	"	Lub. Gr.	487	"
9	Anchor Line	M. Lub.	3,480	New York
	GRANGEMOUTH—			
6	Graham-Yooll and Co. ..	Lamp	11,960	Hamburg
6	J. Currie and Co.	Lub.	4,000	"
6	"	L. Paste	130	"
6	"	"	40	"
6	"	Lub.	6,600	"
6	"	"	2,000	"
9	To Order	"	480	Antwerp
	LEITH—			
3	W. Graham-Yooll and Co. ..	Lamp	3,050	Hamburg
3	G. Gibson and Co.	Lub.	4,240	Antwerp
3	W. Graham-Yooll and Co. ..	Lamp	3,310	Hamburg
3	J. Currie and Co.	Lub.	1,920	"
3	W. Graham-Yooll and Co. ..	Illum.	4,360	"
5	"	"	3,052	"
5	G. Gibson and Co.	Lub.	2,260	Antwerp
5	J. Currie and Co.	"	2,400	Hamburg
9	"	"	280	Bremen
9	Geo. Gibson and Co.	"	2,160	Antwerp
	BELFAST—			
3	J. C. Pinkerton and Co. ..	"	60	Hamburg
9	"	"	80	Antwerp
	Total for Week		5,078,492	

FOR THE WEEK ENDED 16TH DECEMBER, 1907—

LONDON—				
10	London and India Dock Co.	M. Lub.	2,490	Hamburg
10	"	"	440	"
10	Simpson, Spence and Young	Lub.	23,985	Philadel.
10	Mercantile Lighterage Co. ..	"	10,000	"
10	Anglo-American Oil Co. ..	"	21,200	"
10	Fielder, Hickman and Co. ..	"	1,800	New York
10	"	"	3,600	"
10	"	Lub. Gr.	2,400	"
11	Anglo-American Oil Co. ..	Lub.	10,000	"
11	Mercantile Lighterage Co. ..	"	58,750	"
11	R. Park and Co.	M. Lub.	500	Marseilles
12	Page, Son and East	"	80	Antwerp
12	"	Lub. Gr.	340	"
12	T. H. Lee	"	520	Hamburg
12	G. and H. Green	Lub.	4,510	New York
13	Wilkins, Campbell and Co.	M. Lub.	1,000	Antwerp
14	London and India Dock Co.	Lub.	800	Hamburg
14	"	Lub. Gr.	1,170	New York
14	Argo Steamship Co.	Lub.	120	Bremen
16	Wilkins, Campbell and Co.	Lub. Gr.	2,280	Philadel.
16	Scott's Wharf	M. Lub.	4,200	New York
16	Mordaunt Bros.	Lub.	23,100	"
16	Anglo-American Oil Co. ..	"	400	Antwerp
18	T. H. Lee	M. Lub.	40	Hamburg
16	Schlieman's Oil Co.	"	1,890	"
16	"	Lub. Gr.	3,380	"
16	Page, Son and East	M. Lub.	240	Antwerp
LIVERPOOL—				
10	Meade-King, Robinson & Co.	Illum.	4,100	Hamburg
7	"	M. Colza	8,400	Baltimore
12	Worthington and Boler ..	M. Lub.	7,200	Philadel.
12	"	Lub. Gr.	200	"
12	W. B. Dick and Co.	M. Lub.	3,110	"
12	Meade-King, Robinson & Co.	"	43,200	"
13	W. B. Dick and Co.	"	5,160	"
13	Crew, Levick and Co.	"	13,100	"
13	"	M. Colza	2,460	"
13	"	M. Lub.	4,180	"
13	Meade-King, Robinson & Co.	Lamp	4,000	Hamburg
16	"	M. Lub.	4,800	Philadel.
16	Bramwell, Fern and Co. ..	"	2,250	"
16	Pickford's, Ltd.	"	620	New York
16	J. Light and Son	M. Gr.	600	"

DATE.	PORT AND IMPORTER.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Dec.	BRISTOL—			
12	Colhurst and Harding ..	Lub.	480	Antwerp
12	W. Smith and Co.	"	28,960	New York
12	"	M. Lamp	13,560	"
13	Anglo-Bosphorus Oil Co. ..	M. Lub.	4,000	Hamburg
13	H. R. James and Sons ..	Lub.	3,600	New York
15	Heaton and Co.	Lub. Gr.	200	Antwerp
16	E. Stock and Sons	M. Lub.	130	Hamburg
16	"	Lub.	4,000	"
	GLOUCESTER—			
10	Bristol Steam Nav. Co. ..	"	160	"
	GRIMSBY—			
7	J. Sutcliffe and Son	"	590	Antwerp
	HARWICH—			
10	D. Howard	"	60	"
10	"	M. Lub.	90	"
10	"	"	40	"
	HULL—			
12	Hull & Netherlands S.S. Co.	Tar Oil	4,560	Rotterdam
12	T. Wilson, Sons and Co. ..	Lub.	480	Riga
12	"	"	120	Xiania
12	Wilsons and N.E. Railway Shipping Co.	"	400	Hamburg
12	"	"	1,400	Antwerp
13	T. Wilson, Sons and Co. ..	"	2,480	Bergen
13	Wilsons and N.E. Railway Shipping Co.	Lub.	200	Hamburg
13	"	"	800	"
	MANCHESTER—			
10	Geo. B. Taylor	M. Lub.	57,000	Philadel.
10	J. T. Fletcher and Co. ..	"	140	Antwerp
10	"	M. L. Gr.	140	"
12	D. Currie and Co.	M. Lub.	200	Hamburg
12	Geo. B. Taylor	"	40	"
12	Meade-King, Robinson & Co.	"	7,800	Philadel.
12	"	M. Colza	4,000	"
16	Liverpool Storage Co. ..	Lub.	9,320	New York
16	Diamond Lubricating Co. ..	M. Lub.	2,360	"
16	D. Currie and Co.	"	4,000	Hamburg
	SWANSEA—			
11	T. H. Couch	"	1,200	Amsterdam
	ABERDEEN—			
11	D. Alexander and Sons ..	Lub.	400	Hamburg
13	R. Cannon, Reid and Co.	Lamp	1,400	"
	GLASGOW—			
10	Clyde Shipping Co.	M. Lub.	200	Antwerp
10	"	"	320	"
	GRANGEMOUTH—			
11	J. Currie and Co.	Lub.	4,000	Hamburg
12	W. Graham-Yooll and Co. ..	Lamp	8,800	"
16	"	"	8,000	"
	LEITH—			
12	W. Graham-Yooll and Co. ..	"	10,900	"
12	J. Currie and Co.	Lub.	2,200	"
14	W. Graham-Yooll and Co. ..	Lamp	8,720	"
16	J. Currie and Co.	Lub.	500	"
16	W. Graham-Yooll and Co. ..	Lamp	4,270	"
	BELFAST—			
16	G. Heyn and Sons	Lub.	3,200	Riga
13	"	Lamp	21,840	N. Orleans
	DUBLIN—			
12	Palgrave, Murphy and Co.	M. Lub.	245	Antwerp
	Add to Correct:—			
	DUBLIN—			
31/10	Palgrave, Murphy and Co. (Aras)	Gas	12,400	Kustendje
	BARROW—			
15/11	Anglo-American Oil Co. (Suwanee)	Lamp	33,987	New York
			556,507	
	Deduct to correct:—			
	LIVERPOOL—			
31/10	G. B. Taylor	Lub.	48,320	"
	HULL—			
3	T. Wilson, Sons and Co. ..	"	7,000	"
	BARROW—			
15/11	Anglo-American Oil Co. (Suwanee)	Spirit	6,278	"
	Total for Week		494,919	
	Total for the Fortnight ..		5,573,401	





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